## Introduction

⚠ The safety instructions and the user manual should be read through carefully before the product is used for the first time.

📖 The person responsible for the product must ensure that all users understand these directions and adhere to them.

The symbols used have the following meanings:

### ⚠ WARNING
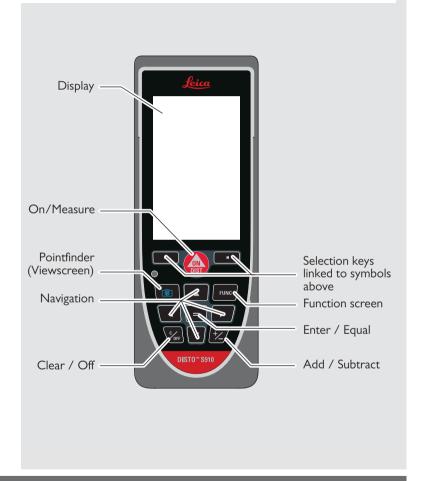
Indicates a potentially hazardous situation or an unintended use which, if not avoided, will result in death or serious injury.

### ⚠ CAUTION

Indicates a potentially hazardous situation or an unintended use which, if not avoided, may result in minor injury and/or appreciable material, financial and environmental damage.

ⓘ Important paragraphs which must be adhered to in practice as they enable the product to be used in a technically correct and efficient manner.

## Overview



- Display
- On/Measure
- Pointfinder (Viewscreen)
- Navigation
- Clear / Off
- Selection keys linked to symbols above
- Function screen
- Enter / Equal
- Add / Subtract
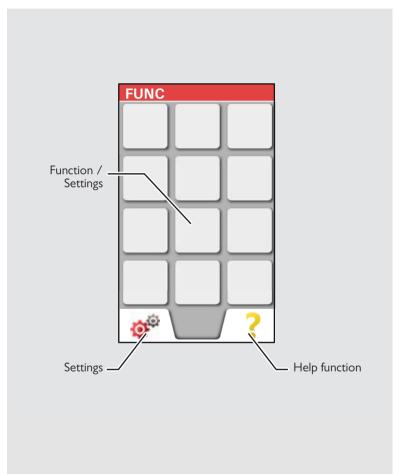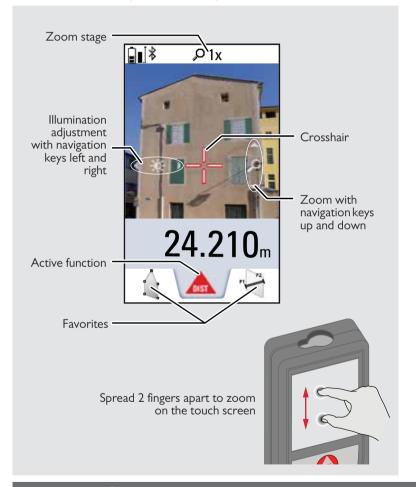
### Basic measuring screen

Status bar

10:39

0.051 m
5.678 m
32.542 m

Main line

199.826 m

Active function
Tap here to start
ON/DIST in a dis-
tance function

DIST

Favorites

### Selection screen

**FUNC**

Function /
Settings

Settings

Help function

## Pointfinder (Viewscreen)

Zoom stage

Illumination adjustment with navigation keys left and right

Crosshair

Zoom with navigation keys up and down

24.210m

Active function

Favorites

Spread 2 fingers apart to zoom on the touch screen

## Icons on Status bar

| | |
|---|---|
| ↕ | Scroll up and down for further results |
| 🔋 | Battery power |
| ✳ | Bluetooth® is switched on |
| ✳ | Bluetooth® connection established |
| ◉ | Device is not leveled |
| ◉ | Device is leveled |
| △⁻ | Offset is activated and subtracts the defined value from measured distance |
| △⁺ | Offset is activated and adds the defined value from measured distance |
| ⧗ | Device is measuring |
| 📶 | DISTO WiFi hotspot activated |
| 📶 | Other device connected to DISTO WiFi hotspot |
| 🔗 | WiFi client mode activated |
| 🔗 | DISTO connected as client to WiFi |
| 🔍 | Zoom |
| ▯ | Measuring reference |

## Charging the Li-Ion battery via USB

Charge the battery before using it for the first time. Use the provided cable to charge the battery.

Plug the small end of the cable into the port of the device, and plug the end of the charger into an electrical socket. Select the appropriate connector for your country. The device cannot be used while it is charging.

The computer can also be used to charge the device, but this takes more time. If the device is connected to the computer via USB cable, you can download or delete the gallery. **It is not possible to upload any data.**



When you charge the battery, the following icons show the status:

Charging              Fully charged



4 h

> Charge batteries when battery symbol is flashing.
> While charging, the device may heat up. This is normal and should not affect the device's lifespan or performance. If the battery gets hotter than 40°C / 104°F, the charger stops.
> At a recommended storage temperature of -20°C to +30°C (-4°F to +86°F), batteries containing a 50% to 100% charge can be stored up to 1 year. After this storage period the batteries must be recharged.
> To save energy, unplug the charger when not in use.
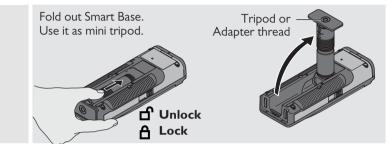
### ⚠ CAUTION
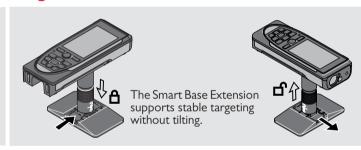
Connecting the charger improperly may cause serious damage to the device. Any damage caused by misuse is not covered by the warranty. Use only Leica-approved chargers, batteries, and cables. Unapproved chargers or cables can cause the battery to explode or damage the device.

If the device is connected to the computer via USB cable, you can download or delete the gallery. It is not possible to upload any data.

## Using the Smart Base

Fold out Smart Base.
Use it as mini tripod.

Tripod or
Adapter thread

🔓 **Unlock**
🔒 **Lock**

## Using the Smart Base Extension

The Smart Base Extension supports stable targeting without tilting.

---

ℹ️ Do not move or tilt the Smartbase during measuring.

We recommend to use a tripod with the Leica FTA360-S adapter.

## Using the Touch Screen

**i** Use only fingers to use the touch screen.
Do not allow the touch screen to come into contact with other electrical devices.
Electrostatic discharges can cause the touch screen to malfunction.
Do not allow the touch screen to contact water. The touch screen may malfunction in humid conditions or when exposed to water.
To avoid damaging the touch screen, do not tap it with anything sharp or do not apply excessive pressure to it with your fingertips.
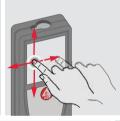
**Tapping**

Tap on the display to open an on-screen button or to make a selection. Tapping on the icon in the middle of the bottom line activates the distance measurement or triggers the camera.

**Dragging**

Drag on the display to move to prior or to next screen in the galerie function.

**Pinching**

Spread 2 fingers apart to zoom if pointfinder is activated.

**i** Instead of using the touch screen, the normal keypad buttons can be used also.

## Switching ON/OFF

**ON**

DIST ON

**OFF**

C/OFF
**2 sec**

Device is turned OFF.

**i** If no key is pressed for 180 sec, the device switches off automatically.

## Clear

**1x**

C/OFF

Undo last action.

**2x**

C/OFF

Leave actual function, go to default operation mode.
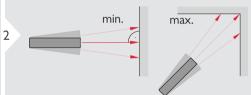
## Message Codes

If the info icon appears with a number, observe the instructions in section "Message Codes".
Example:

i 256

## Permanent / Minimum-Maximum measuring

1  ON DIST
**2 sec**

2  min.    max.

Used to measure room diagonals (maximum values) or horizontal distance (minimum values)

The minimum and maximum distance measured is displayed (min, max.). The last value measured is displayed in the main line.

**max
min**
**8.532 m**

3  ON DIST

Stops permanent / minimum-maximum measuring.

## Add / Subtract

1  ON DIST

**7.332 m**

2  +/−
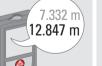
The next measurement is **added** to the previous one.

**2x**
+/−

The next measurement is **subtracted** from the previous one.

3  ON DIST

7.332 m
**12.847 m**

4  =

**20.179 m**
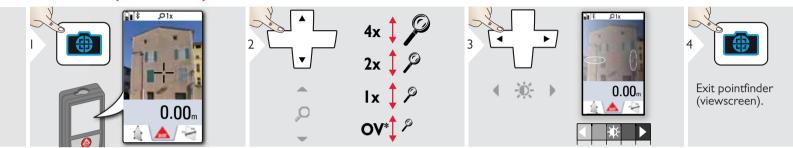
**i** This process can be repeated as required. The same process can be used for adding or subtracting areas or volumes.

## Pointfinder (Viewscreen)

| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |

4x

2x

1x

OV*

Exit pointfinder (viewscreen).
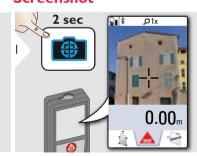
i This is a great help for outdoor measuring. The integrated pointfinder (viewscreen) shows the target on the display. The device measures in the middle of the cross hair, even if the laser dot is not visible.
Parallax errors occur when the pointfinder camera is used on close targets, with the effect that the laser appears displaced in the crosshair. In this case rely on the real laser dot.

* OV = Overview

## Screenshot

| 1 | 2 sec |
|---|---|
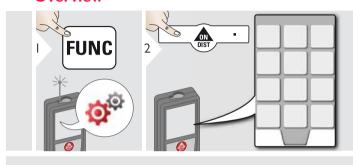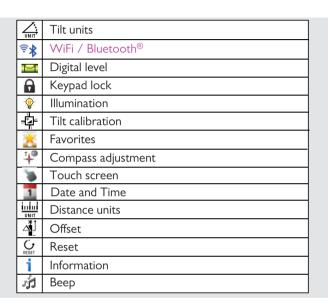
Screenshot photo is saved in gallery.

## Overview



| | |
|---|---|
| ◩ | Tilt units |
| 📶✳ | WiFi / Bluetooth® |
| ▱ | Digital level |
| 🔒 | Keypad lock |
| 💡 | Illumination |
| ⊡ | Tilt calibration |
| ⭐ | Favorites |
| ✴ | Compass adjustment |
| 👆 | Touch screen |
| 📅 | Date and Time |
| ⊞ | Distance units |
| ◿ | Offset |
| ↻ | Reset |
| ℹ | Information |
| 🎵 | Beep |

## ◩ Tilt units



3    Switch between the following units:

| | |
|---|---|
| 360.0° | 0.00 % |
| ± 180.0° | 0.0 mm/m |
| ± 90.0° | 0.00 in/ft |

4    Confirm setting.

5    Exit settings.

## 📏 Distance units

**1** 

**2** =
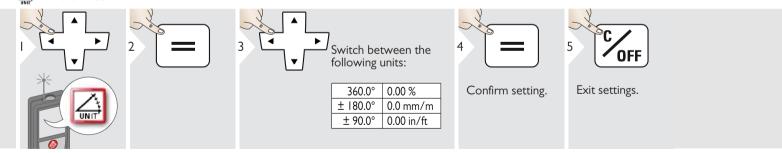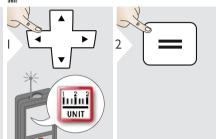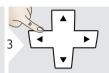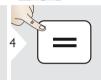
**3** Switch between the following units:

**Art. No. 805080:**

| | |
|---|---|
| 0.00 m | 0.00 ft |
| 0.000 m | 0.00 in |
| 0.0000 m | 0 in 1/32 |
| 0.0 mm | 0'00" 1/32 |

**US-Model Art. No. 808183:**

| | |
|---|---|
| 0.00 m | 0 in 1/16 |
| 0.000 m | 0'00" 1/16 |
| 0.0000 m | 0 in 1/8 |
| 0.0 mm | 0'00" 1/8 |
| 0.00 ft | 0 in 1/4 |
| 0.00 in | 0'00" 1/4 |
| 0 in 1/32 | 0.000 yd |
| 0'00" 1/32 | |
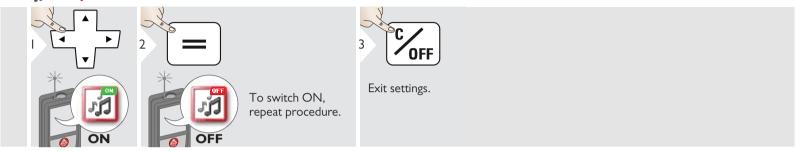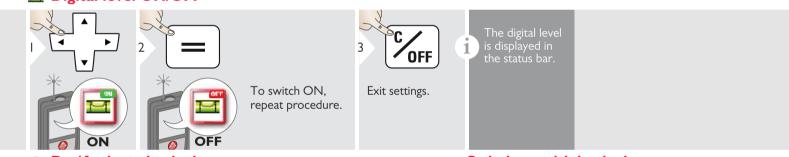
**4** = Confirm setting.

**5** C/OFF Exit settings.

### ♫ Beep ON/OFF

1

2

To switch ON,
repeat procedure.

**ON**          **OFF**

3  C/OFF

Exit settings.

### 〰 Digital level ON/OFF

1

2

To switch ON,
repeat procedure.

**ON**          **OFF**

3  C/OFF

Exit settings.

ⓘ The digital level is displayed in the status bar.

### 🔒 De-/Activate keylock                              Switch on with keylock

1

2

To deactivate, repeat procedure. The keylock is active if device is switched off.

**OFF**          **ON**

3  C/OFF

Exit settings.

1  ON DIST

2  +/−

within 2 sec

## 📶 **Bluetooth® /WIFI**
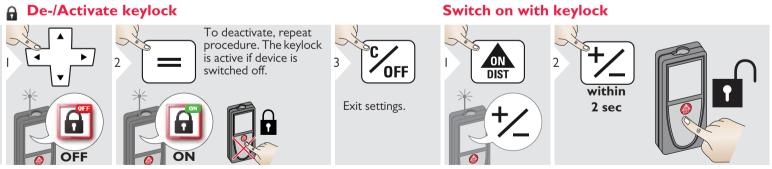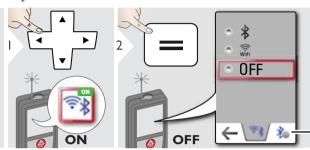
| | | |
|---|---|---|
| 1 ▲ ◄ ► ▼ ON | 2 = OFF | Explanation see info box below.<br><br>Special Settings for data transfer. |

3 **C/OFF**

Exit settings.

ℹ **Default mode:** Bluetooth®/WIFI is switched on and black Bluetooth®/WIFI icon is displayed in status bar. Blue Bluetooth®/WIFI icon in status line is displayed if device is connected with Bluetooth®/WIFI.

---

ℹ **Special Bluetooth® Settings**

Figure Mode: Use this mode if the data needs to be transferred in figures, e.g. working with spread sheets. Ft/in fractional is converted into ft/in decimal.
Device is connected. Favorites disappear and two softkeys appear:
↔ Allows the arrow keys to move the cursor on your computer.

▶ sends the value of the main line to the computer.

Text Mode: Use this mode if the data needs to be transferred as text, e.g. working with word processing programs.

Device is connected. Favorites disappear and two softkeys appear:

↔ Allows the arrow keys to move the cursor on your computer.

▶ sends the value of the main line to the computer.

App Mode: Use this mode to transfer the data using an App.
Special properties: ENCRYPTED is the default setting. In case of trouble with data transfer, select mode UNENCRYPTED.

ℹ **Special WIFI Settings**

WiFi: DISTO acts as hotspot.
HOTSPOT Data transfer unsecured or secured with serial number as password. Recommended for standard use.

WiFi: Another device acts as hotspot.
WiFi Recommended for GIS applications.

ⓘ **Bluetooth® data transfer**
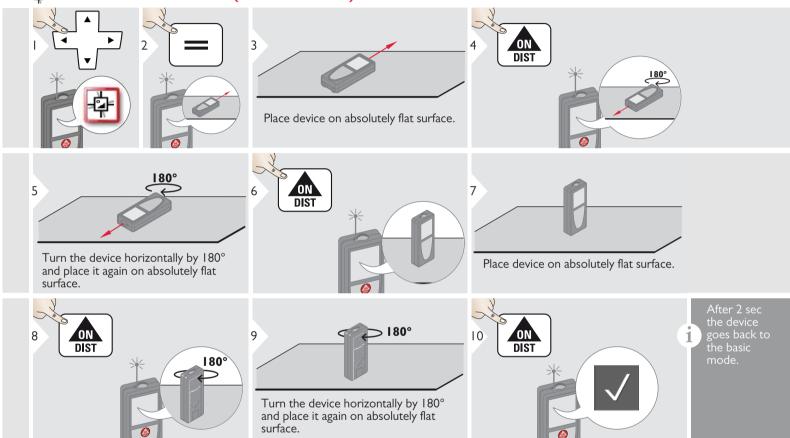
Connect the device with your smart phone, tablet, laptop,…
The actual measurement is transferred automatically if Blue-
tooth® connection is established. To transfer a result from
the main line, press =. Bluetooth® switches off as soon as the
laser distance meter is switched off.

The efficient and innovative Bluetooth® Smart module
(with the new Bluetooth® standard V4.0) works together
with all  Bluetooth® Smart Ready devices. All other Blue-
tooth® devices do not support the energy saving Blue-
tooth® Smart Module, which is integrated in the device.
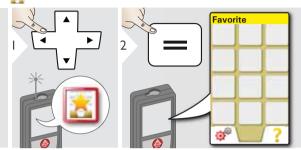
We provide no warranty for free DISTO™ software and of-
fer no support for it. We accept no liability whatsoever
arising from the use of the free software and we are not
obliged to provide corrections nor to develop upgrades. A
wide range of commercial software can be found on our
homepage. Apps for Android® or Mac iOS can be found in
special internet shops.
For more details, see our homepage.
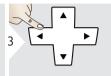
### ⊡ Calibration of tilt sensor (Tilt Calibration)

**1** 

**2** 

**3** Place device on absolutely flat surface.

**4** 180°

**5** Turn the device horizontally by 180° and place it again on absolutely flat surface.

**6** 

**7** Place device on absolutely flat surface.

**8** 180°

**9** 180° Turn the device horizontally by 180° and place it again on absolutely flat surface.

**10** 

ⓘ After 2 sec the device goes back to the basic mode.

## ⭐ Personalized favorites

1

2

**Favorite**

3

Select favorite function.

4
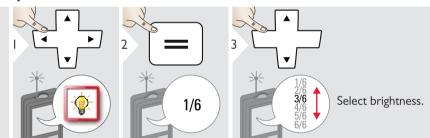
Press selection key left or right. Function is set as favorite above the corresponding selection key.

ℹ Select your favorite functions for quick access.

Short cut:
Press 2 sec on a selection-key in the measuring mode. Select your favorite function and press again short on the corresponding selection key.

## 💡 Illumination

1

2

1/6

3

1/6
2/6
3/6
4/6
5/6
6/6

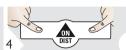Select brightness.

4

Confirm setting.

5

C/OFF

Exit settings.

ℹ To save power reduce brightness if not necessary.

## 👆 Touch Screen ON/OFF

1

2

OFF    ON

To deactivate, repeat procedure.

3
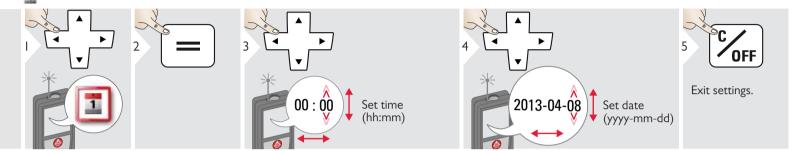
C/OFF

Exit settings.

## 🔲 Date and Time

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | 00 : 00 — Set time (hh:mm) | 2013-04-08 — Set date (yyyy-mm-dd) | C/OFF — Exit settings. |
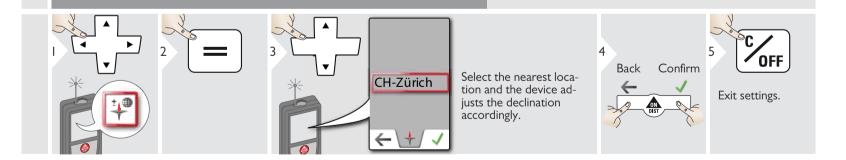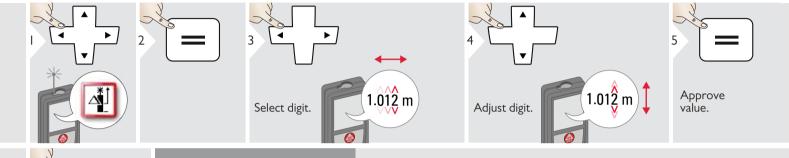
## ⊹ Compass Adjustment

**Adjusting the magnetic declination**

ℹ Depending on your geographic location, the angle of declination may vary from other locations, as the geographic and magnetic poles are aligned. However, if the reference location is not selected, the difference in declination between the poles can differ greatly. For best results, select the nearest geographic reference point using the steps below.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | CH-Zürich — Select the nearest location and the device adjusts the declination accordingly. | Back  Confirm | C/OFF — Exit settings. |

## Offset
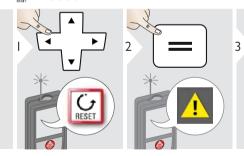
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | Select digit. 1.012 m | Adjust digit. 1.012 m | Approve value. |

| 6 | i |
|---|---|
| Exit settings. | An offset adds or subtracts a specified value automatically to or from all measurements. This function allows tolerances to be taken into account. The offset icon is displayed. |

## Reset

| 1 | 2 | 3 | 4 | i |
|---|---|---|---|---|
| | | Second confirmation with selection keys: Refuse: Confirm: ON/DIST | Exit settings. | Reset returns the instrument to the factory settings. All customized settings and memories are lost. **A HARDWARE-RESET is done by pressing 15 sec on ON/DIST key.** |

## Overview

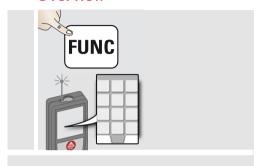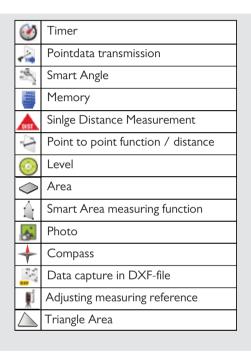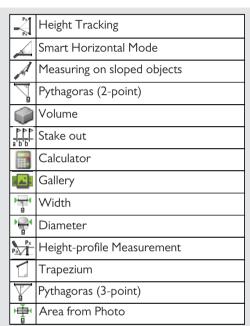| | | | | |
|---|---|---|---|---|
| | Timer | | | Height Tracking |
| | Pointdata transmission | | | Smart Horizontal Mode |
| | Smart Angle | | | Measuring on sloped objects |
| | Memory | | | Pythagoras (2-point) |
| | Sinlge Distance Measurement | | | Volume |
| | Point to point function / distance | | | Stake out |
| | Level | | | Calculator |
| | Area | | | Gallery |
| | Smart Area measuring function | | | Width |
| | Photo | | | Diameter |
| | Compass | | | Height-profile Measurement |
| | Data capture in DXF-file | | | Trapezium |
| | Adjusting measuring reference | | | Pythagoras (3-point) |
| | Triangle Area | | | Area from Photo |

## ⏱ Timer

| 1 | 2 | 3 | | 4 | |
|---|---|---|---|---|---|

30 sec
10 sec
5 sec
2 sec
Off

Select release time.

Confirm setting.

ⓘ The self release starts if ON/Measure key is pressed.

## 🖩 Calculator

| 1 | 2 | 3 | | |
|---|---|---|---|---|

Select key on display.

Confirm every key.

Use selection keys for clear or result.

ⓘ The measurement result from the main line is taken over to the calculator and can be used for further calculations.
Ft/in fractions are converted into ft/in decimal.
To take over a result from the calculator in the basic mode press DIST before leaving the calculator function.

## Adjusting measuring reference

1

2

3

Distance is measured from the rear of the device (standard setting).

Distance is measured from Smart Base connection

Distance is measured from Smart Base baseplate

Distance is measured from the front of the device (lock symbol = permanently).

**i** The orientation of the Smart Base is automatically detected and the zero point is accordingly adjusted.

4

Confirm setting.

**i** If device is switched off, reference goes back to standard setting (rear of the device).

## Memory

| 1 | 2 | 3 | | 4 | i |
|---|---|---|---|---|---|

Switch between measurements.

Delete memory.

8.449 m

Take over value for further actions.

Use Up/Down navigation keys to show more detailed results of the specific measurement.

Short cut

## Measuring single distance

| 1 | 2 | 3 ON DIST | 4 ON DIST | i |
|---|---|---|---|---|

Aim active laser at target.

8.532 m

Target surfaces:
Measuring errors can occur when measuring to colourless liquids, glass, styrofoam or semi-permeable surfaces or when aiming at high gloss surfaces. Against dark surfaces the measuring time increases.

## Smart Horizontal Mode

| 1 | 2 | 3 ON DIST | 4 ON DIST |
|---|---|---|---|

Aim laser at target.

$40.8\ °$ — $\alpha$
$5.204\ m$ — $\mathbf{x}$
$0.032\ m$ — $\mathbf{y}$
$4.827\ m$ — $\mathbf{z}$

(up to 360° and a transverse tilt of ±10°)

## ⌖ Level

| 1 | 2 | 3 | i |
|---|---|---|---|

0.3°

90° 🔊
0° 🔊

i Displays inclinations of 360° with a transverse inclination of +/- 10°. Instrument beeps at 0° and 90°. Ideal for horizontal or vertical adjustments.
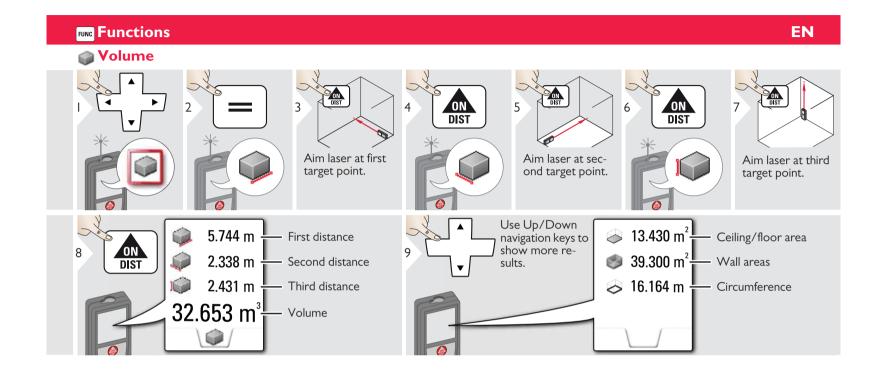
## ◇ Area

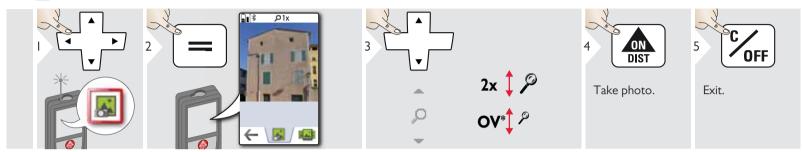| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

**3** Aim laser at first target point.

**5** Aim laser at second target point.

**6**

◇ 6.228 m — First distance
◇ 3.9I0 m — Second distance
◇ 20.276 m — Circumference
24.352 m$^2$ — Area

i The result is shown in the main line and the measured value above.
Partial Measurements / Painter function:
Press + or - before starting the first measurement. Measure and add or subtract distances. Finish with =. Measure 2nd length.

## Volume



1

2

3 Aim laser at first target point.

4

5 Aim laser at second target point.

6

7 Aim laser at third target point.

8

5.744 m — First distance
2.338 m — Second distance
2.431 m — Third distance
32.653 m$^3$ — Volume

9 Use Up/Down navigation keys to show more results.

13.430 m$^2$ — Ceiling/floor area
39.300 m$^2$ — Wall areas
16.164 m — Circumference

## 🖾 Photo

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | **2x** 🔍  **OV*** 🔍 | Take photo. | Exit. |

**i**　Tap on the  camera icon in the middle of the bottom line to take a photo.
For screenshots, press camera key for 2 sec.

\* OV = Overview

## ✦ Compass

| | | | |
|---|---|---|---|
| 1 | 2 Calibrate Compass? <br><br> Refuse   Confirm <br> ✗        ✓ | 3  ═══ <br><br> 0.0°N | The arrow always points to true north. |
| | | | 4 **C/OFF** <br><br> Exit. |
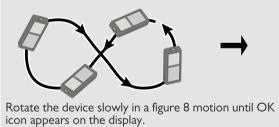
ℹ️ At the following places the compass probably does not work correctly:

• Inside of buildings

• Close to high voltage lines (e.g. on train platforms)

• Close to magnets, metal objects or electrical household appliances

ℹ️ If an error message occurs, the device is tilted too much (>20° over the front / > 10° sidewise).

### ✦ Calibration of Compass:

ℹ️ The compass has to be calibrated before every first measurement after switching on the device.

Rotate the device slowly in a figure 8 motion until OK icon appears on the display.

ℹ️ After 2 sec the device goes back to the compass mode.

## Gallery

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| | | | Exit. |

i  If the device is connected to the computer via USB cable, you can download or delete the gallery. It is not possible to upload any data.

## △ Triangular area

1    2    3   Aim laser at first target point.

4    5   Aim laser at second target point.

6    7   Aim laser at third target point.

8

| | | |
|---|---|---|
| △ | 4.248 m | First distance |
| △ | 4.129 m | Second distance |
| △ | 2.425 m | Third distance |
| | 4.855 m$^2$ | Triangular area |

9   Use Up/Down navigation keys to show more results.

33.60°  — Angle between first and second measurement

△ 10.802 m  — Circumference

## Height-profile measurement

1

2

3 **ON DIST**

Aim at reference point (REF).

4 **ON DIST**

5 **ON DIST**

Aim at additional points 1-x.

6

2.042 m — **d** Horizontal distance to device

0.054 m — **h** Height difference to reference point (REF).

7 **2x** **C / OFF**

Exit function.

**i** Ideal for measuring of height differences to a reference point. Can be also used to measure profiles and terrain sections. After measuring the reference point, the horizontal distance and height is displayed for each following point.

### Sloped objects

1    2    3    **ON DIST** Aim laser at upper target point.    4 **ON DIST**    5 **ON DIST** Aim laser at lower target point.

6 **ON DIST**

11.00 ° — P2 angle

30.367 m — P2 distance

-3.440 m — Vertical height between both points

5.452 m — Distance between both points

7   Use Up/Down navigation keys to show more results.

39.10 ° — Included angle between both points

-4.230 m — Horizontal distance between both points

ℹ Indirect distance measuring between 2 points with additional results. Ideal for applications such as length and slope of roof, height of chimneys,…
It is important, that the instrument is positioned in the same vertical plane as the 2 measured points. The plane is defined of the line between the 2 points. This means, that the device on the tripod is only moved vertically and not turned horizontally to reach both points.
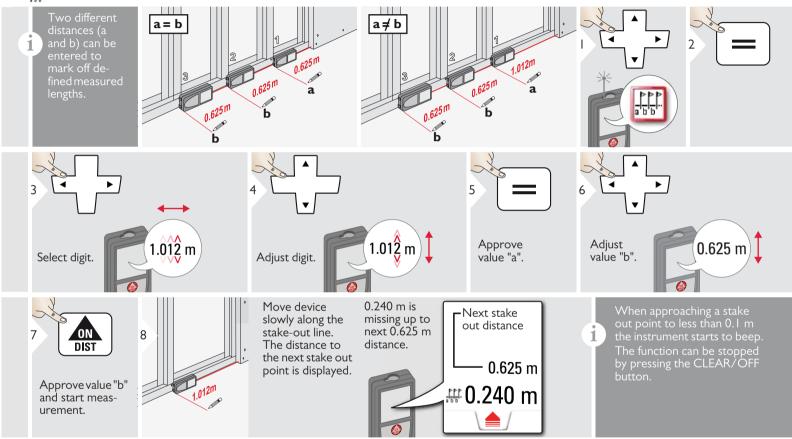
## ⌐ Height tracking

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

Aim laser at lower point.

Aim laser at upper points and angle/ height tracking starts automatically.

6

-10.55 ° — **α**

6.271 m — **P0**

29.89 ° — **β** = Tracking angle if device is turned on tripod

3.475 m — **y** = Tracking height if device is turned on tripod

7 — Stops height tracking.

-10.55 °

6.271 m

44.80 °

8.478 m

8 — Use Up/Down navigation keys to show more results.

◁ 7.160 m — **z**

ℹ Heights of buildings or trees without suitable reflective points can be determined. At the bottom point, distance and tilt is measured - which needs a reflective laser target. The upper point can be targeted with the pointfinder / crosshair and does not need a reflective laser target as only the inclination is measured.

## Trapezium

1

2

3

Aim laser at upper point.

4

5

Aim laser at 2nd point.

6

13.459 m — **h**

16.440 m — **y**

70.80° — **β**

**5.790 m** — **x**

x

h

α

β

7 Use Up/Down navigation keys to show more re-sults.

78.383 m$^2$ — Trapezium area

20.9 ° — α

## ⊞ Stake out

| | | | |
|---|---|---|---|
| ℹ Two different distances (a and b) can be entered to mark off defined measured lengths. | a = b  | a ≠ b  | 1  · 2 = |

| 3 Select digit. | 4 Adjust digit. | 5 Approve value "a". | 6 Adjust value "b". |
|---|---|---|---|
| 1.012 m | 1.012 m | | 0.625 m |

| 7 **ON DIST** Approve value "b" and start measurement. | 8  1.012m | Move device slowly along the stake-out line. The distance to the next stake out point is displayed. | 0.240 m is missing up to next 0.625 m distance. | Next stake out distance<br>0.625 m<br>⊞ 0.240 m | ℹ When approaching a stake out point to less than 0.1 m the instrument starts to beep. The function can be stopped by pressing the CLEAR/OFF button. |

## Pythagoras (2-point)

1 

2 

3 ON DIST

Aim laser at first target.

4 ON DIST

5 ON DIST

Aim laser at second target.

6 ON DIST

25.133 m
21.383 m
**13.207 m**

**i** The result is shown in the main line.
Pressing the measuring key for 2 sec in the function activates automatically Minimum or Maximum measurement.

We recommend to use the pythagoras only for indirect horizontal measuring.
For height measuring (vertical) it is more precise to use a function with the inclination measuring.

## ⌐ **Pythagoras (3-point)**

1  2  3 Aim laser at first target. 4  5 Aim laser at second target. 6  7 Aim laser at third target.

8 

24.298 m

21.264 m

23.018 m

**20.571 m**

ℹ The result is shown in the main line.
Pressing the measuring key for 2 sec in the function activates automatically Minimum or Maximum measurement.

We recommend to use the pythagoras only for indirect horizontal measuring.
For height measuring (vertical) it is more precise to use a function with inclination measurement.

## Width

**1**

**2**

Q1x

-.--- m

**3**

ON
DIST

16.42m

**It is absolutely necessary to aim with the laser perpendicular to the object.**

**4**

**4x** 🔍

**2x** 🔍

**1x** 🔍

**OV*** 🔍

If necessary, use the Zoom for precise aiming.

* OV = Overview

**5**

ON
DIST

Q1x

16.42 m

Select arrows with the cursor keys or by tapping on the display and adjust with softkeys. Corresponding width is calculated.

**6**

Confirm measuremtent.

**7**

27.539 m ——— Distance to object

16.42 m

**8**

C/OFF

Exit.

## Diameter

**1**

**2**

-.--- m

**3**

∅

Aim laser perpendicular to the middle of the round object.

**4**

**4x**

**2x**

**1x**

**OV***

If necessary, use the Zoom for precise aiming.

\* OV = Overview

**5**

0.237 m

Select arrows with the cursor keys or by tapping on the display and adjust with softkeys. Corresponding diameter is calculated.

**6**

Confirm measurement.

**7**

More results are displayed.

0.744 m —— Circumference
0.044 m² —— Circular area

0.237 m

**8**

C/OFF

Exit.

## Area from Photo

**1** 

**2** -.--- m²

**3** **ON DIST**

**Aim perpendicular to the horizontal center line of the area. This area must be perfectly flat on the vertical plane.**

**4**
4x
2x
1x
OV*

If necessary, use the Zoom for precise aiming.

\* OV = Overview

**5** **ON DIST**
2.015m
9.232m²

Select arrows with the cursor keys or by tapping on the display and adjust with softkeys. Corresponding area is calculated.

**6** Confirm measurement.

**7**
4.581 m — Width
2.015 m — Length
13.192 m — Circumference
9.232m²

**8** **C/OFF**

Exit.

## Pointdata transmission

1

2 P

3 ON DIST — Aim laser at first point.

4 ON DIST — 13.207 m — ON DIST — WiFi data transfer of 3 coordinates x, y, z

5 ON DIST — Aim at additional points.

6 **2x** C/OFF — Leave actual function, go to default operation mode.

i This function sends the x, y z coordinates of the measured point. Used in combination with DISTO™ transfer or ??? Plugin.

Data transfer works only with WiFi.

### Levelling

i Level the device to get more accurate measuring data.

Do not move device after leveling.

For leveling, Smart Base has to be folded out and device needs to be in an inclination range of +/-5°.

1 2 3 — 90° — 1 2 3 — 90° — 1 2 3 — 90°

Rotate the device two times clockwise 90°. Follow the instructions on the display.
Levelling is finished when OK icon appears on the display.

## Smart Angle measuring

| 1 | 2 | Initialize device for vertical and horizontal values. Details see "Levelling". | 3 | 4 | 5 |
|---|---|---|---|---|---|

Aim laser at point on first wall.

Aim laser at corner.

| 6 | 7 | 8 |
|---|---|---|

Aim laser at point on second wall.

1.246 m
5.269 m

89.56° α

### Levelling

**i**

Level the device to get more accurate measuring data.

Do not move device after leveling.

For leveling, Smart Base has to be folded out and device needs to be in an inclination range of +/-5°.

1 2 3    1 2 3    1 2 3

90°

90°

Rotate the device two times clockwise 90°. Follow the instructions on the display.
Levelling is finished when OK icon appears on the display.

## Point to point function / distance

1

2

Initialize device for vertical and horizontal values.
See "Levelling".

P1

3

Aim laser at first target.

4

5

Aim laser at second target.

6

13.207m

**i** Level the device and further values can be displayed (see "Levelling"!

**Do not move Smart Base after levelling!**

-1.697m
2.419m
35.06°

2.995m

**Check status line:**

indicates proper leveling

indicates insufficient leveling

### Levelling

**i** Level the device to get more accurate measuring data.

Do not move device after leveling.

For leveling, Smart Base has to be folded out and device needs to be in an inclination range of +/-5°.

1 2 3

90°

1 2 3

90°

1 2 3

Rotate the device two times clockwise 90°. Follow the instructions on the display.
Levelling is finished when OK icon appears on the display.

## 🔧 Smart Area measuring

| | | | |
|---|---|---|---|
| 1 | 2 Initialize device for vertical and horizontal values. Details see "Levelling". | 3 ON DIST 1 Aim at first target. | 4 ON DIST ✓ 5.873m |

| | |
|---|---|
| 5 ON DIST 2 3 4 1 5 Aim at additional points (max. 20) | 6 ON DIST 84.675m² ✓ |

### 🌐 Levelling

ℹ️ Level the device to get more accurate measuring data.

Do not move device after leveling.

For leveling, Smart Base has to be folded out and device needs to be in an inclination range of +/-5°.

1 2 3    1 2 3    1 2 3    90°    90°

Rotate the device two times clockwise 90°. Follow the instructions on the display.
Levelling is finished when OK icon appears on the display.

## Data capture in DXF-file

1 

2 

P

3 

ON
DIST

Aim at first point.

4 

ON
DIST

Aim at additional points (max. 30)

5 

ON
DIST

Stops DXF capture and saves data.

6 

2x

C/OFF

Leave actual function, go to default operation mode.

i Max. 20 DXF files can be generated (with 30 measuring points/photos each).

### Levelling

i Level the device to get more accurate measuring data.

Do not move device after leveling.

For leveling, Smart Base has to be folded out and device needs to be in an inclination range of +/-5°.



1 2 3    1 2 3    1 2 3

90°

90°

Rotate the device two times clockwise 90°. Follow the instructions on the display.
Levelling is finished when OK icon appears on the display.

| Distance measurement | (ISO 163331-1) |
| --- | --- |
| Accuracy with favourable conditions* | ± 1.0 mm / 0.04 in *** |
| Accuracy with unfavourable conditions** | ± 3.0 mm / 0.12 in *** |
| Range with favourable conditions* | 0.05m - 300 m / 0.16 - 984 ft |
| Range with unfavourable condition** | 0.05m - 150m (0.16 – 492 ft)**** |
| Smallest unit displayed | 0.1 mm / 1/32 in |
| X-Range Power Technology™ | yes |
| Ø laser point at distances | 6 /30 / 60 mm (10 / 50 / 100 m) |

| Tilt measurement | |
| --- | --- |
| Measuring tolerance to laser beam**** | -0.1° / +0.2° |
| Measuring tolerance to housing**** | ± 0.1° |
| Range | 360° |

| Smart Base | |
| --- | --- |
| Working range vertical sensor | -40° to 80° |
| Tolerance vertical sensor | up to +/- 0.1° |
| Working range horizontal sensor | 360° |
| Tolerance Horizontal Sensor | up to +/- 0.1° |
| Tolerance P2P function at distances (combination of sensors and distance measuring) | approx. : +/- 2 mm / 2 m +/- 5 mm / 5 m +/- 10 mm /10 m |

| Device levelling | |
| --- | --- |
| Levelling range | +/- 5° |
| Levelling accuracy | +/- 0.05° |

| General | |
| --- | --- |
| Laser class | 2 |
| Laser type | 635 nm, < 1 mW |
| Protection class | IP54 (dust- and splash water protected) |
| Autom. laser switch off | after 90 s |
| Autom. power switch-off | after 180 s |
| Bluethooth® Smart | Bluethooth v4.0 |
| Range of Bluethooth® | <10 m |
| WiFi | yes |
| Range of WiFi | 10 m |
| Dimension (H x D x W) | 61 x 32 x 164 mm 2.4 x 1.3 x 6.5 in |
| Weight | 291 g / ... oz |
| Temperature range: | |
| - Storage | -25 to 60 °C -13 to 140 °F |
| - Operation | -10 to 50 °C 14 to 122 °F |
| - Charging | -10 to 40 °C 14 to 104 °F |

| Photos / Screenshots | |
| --- | --- |
| Resolution for photos | 800 x 600 dpi |
| Resolution for screenshots | 240 x 400 dpi |
| File format | JPG |
| Download of gallery | USB |

| Battery (Li-Ion) | |
| --- | --- |
| Rated voltage | 3.7 V |
| Capacity | 2.6 Ah |
| Measurements per battery charge | Approx. 4000 |
| Charging time | Approx. 4 h |
| Output voltage | 5.0 V |
| Charging current | 1 A |

* favourable conditions are: white and diffuse reflecting target (white painted wall), low background illumination and moderate temperatures.

** unfavourable conditions are: targets with lower or higher reflectivity or high background illumination or temperatures at the upper or lower end of the specified temperature range.

*** Tolerances apply from 0.05 m to 10 m with a confidence level of 95%. With favourable conditions the tolerance may deteriorate by 0.05 mm/m for distances between 10 m to 30 m, by 0.10 mm/m between 30 m and 100 m and by 0.20 mm/m for distances above 100 m.

With unfavourable conditions the tolerance may deteriorate by 0.10 mm/m for distances between 10 m to 30 m, by 0.20 mm/m between 30 m and 100 m and by 0.30 mm/m for distances above 100 m.

**** after user calibration. Additional angle related deviation of +/- 0.01° per degree up to +/-45° in each quadrant.

Applies at room temperature. For the whole operating temperature range the maximum deviation increases by +/-0.1°.

**ⓘ** At a recommended storage temperature of -20°C to +30°C (-4°F to +86°F), batteries containing a 50% to 100% charge can be stored up to 1 year. After this storage period the batteries must be recharged.

**ⓘ** For accurate indirect results, the use of a tripod is recommended. For accurate tilt measurements a transverse tilt should be avoided.

| Functions | |
|---|---|
| **Distance measuring** | yes |
| **Min/Max measuring** | yes |
| **Permanent measuring** | yes |
| **Stake-out** | yes |
| **Addition/Subtraction** | yes |
| **Area** | yes |
| **Triangle area** | yes |
| **Volume** | yes |
| **Trapezium** | yes |
| **Painter function (area with partial measurem.)** | yes |
| **Pythagoras** | 2-point, 3-point |
| **Smart Horizontal Mode / Indirect height** | yes |
| **Height-profile measurement** | yes |
| **Level** | yes |
| **Sloped objects** | yes |
| **Height tracking** | yes |
| **Memory** | yes |
| **Beep** | yes |
| **Illuminated colour display** | yes |
| **Pointfinder (Viewscreen)** | 4x zoom, OV |
| **Bluetooth® Smart** | yes |
| **Personalized Favorites** | yes |
| **Timer** | yes |
| **Calculator** | yes |
| **Photo/Screenshot** | yes |
| **Compass** | yes |
| **Gallery with USB download** | yes |
| **Diameter** | yes |
| **Width** | yes |
| **Area from Photo** | yes |
| **Smart Base** | yes |
| **Pointdata transmission** | yes |
| **Point to point function /distance** | yes |
| **Smart Angle** | yes |
| **Smart Area** | yes |
| **DXF Data capture** | yes |

If the message **Error** does not disappear after switching on the device repeatedly, contact the dealer.

If the message **InFo** appears with a number, press the Clear button and observe the following instructions:

| No. | Cause | Correction |
|---|---|---|
| 156 | Transverse tilt greater than 10° | Hold the instrument without any transverse tilt. |
| 162 | Calibration mistake | Make sure, the device is placed on a absolutely horizontal and flat surface. Repeat the calibration procedure. If the mistake still occurs, contact your dealer. |
| 204 | Calculation error | Perform measurement again. |
| 240 | Data transfer error | Repeat procedure. |
| 252 | Temperature too high | Let device cool down. |
| 253 | Temperature too low | Warm device up. |
| 255 | Received signal too weak, measuring time too long | Change target surface (e.g. white paper). |
| 256 | Received signal too high | Change target surface (e.g. white paper). |

| No. | Cause | Correction |
|---|---|---|
| 258 | Measurement outside of measuring range | Correct range. |
| 260 | Laser beam interrupted | Repeat measurement. |
| 300 | Smart Base not folded out | Fold out Smart Base |
| 301 | Device was moved, leveling not valid any more | Proceed leveling again |
| 302 | «Point data transmission» is selected, but WiFi is off | Switch on WiFi |
| 340 | WiFi: Data transfer error | Repeat procedure |
| 341 | Authentication Error | Use correct password |

## Care

- Clean the device with a damp, soft cloth.
- Never immerse the device in water.
- Never use aggressive cleaning agents or solvents.

## Warranty under PROTECT by Leica Geosystems

### Lifetime Manufacturer's Warranty

Warranty coverage for the entire usage time of the product under PROTECT according to Leica Geosystems International Limited Warranty and PROTECT General Terms & Conditions set out under www.leica-geosystems.com/protect. Free of charge repair or replacement of all products or any parts under PROTECT that suffer defects as a result of faults in materials or workmanship.

### 3 Years No Cost

Additional services should the product under PROTECT become defective and require servicing under normal conditions of use, as described in the user manual, at no additional charge.

To receive the "3 years No Cost" period, the product under PROTECT must be registered at http://myworld.leica-geosystems.com within 8 weeks of the purchase date. If the product under PROTECT is not registered, a "2 years No Cost" period applies.

## Garantie unter PROTECT by Leica Geosystems

### Lebenslange Herstellergarantie

Gewährleistungsrechte während der gesamten Nutzungszeit des Produkts unter PROTECT gemäß Leica Geosystems' Internationaler Herstellergarantie und den Allgemeinen Geschäftsbedingungen für PROTECT, nachzulesen unter www.leica-geosystems.com/protect. Kostenlose Reparatur oder Austausch aller defekter Produkte aufgrund von Material- oder Verarbeitungsfehlern.

### 3 Jahre keine Zusatzkosten

Zusätzliche Services, ohne Zusatzkosten, falls beim Produkt unter normaler Benutzung, wie in der Bedienungsanleitung beschrieben, ein Defekt auftritt und bestimmte Serviceleistungen notwendig werden.

Für die "3 Jahre ohne Zusatzkosten" muss das Produkt auf unserer Website http://myworld.leica-geosystems.com binnen acht Wochen nach Kaufdatum registriert werden. Für das nicht registrierte Produkte unter PROTECT gilt ein Zeitraum von "2 Jahren ohne Zusatzkosten".

The person responsible for the instrument must ensure that all users understand these directions and adhere to them.

## Areas of responsibility

### Responsibilities of the manufacturer of the original equipment:

Leica Geosystems AG

Heinrich-Wild-Strasse

CH-9435 Heerbrugg

Internet: www.disto.com

The company above is responsible for supplying the product, including the User Manual in a completely safe condition.

The company above is not responsible for third party accessories.

### Responsibilities of the person in charge of the instrument:

- To understand the safety instructions on the product and the instructions in the User Manual.
- To be familiar with local safety regulations relating to accident prevention.
- Always prevent access to the product by unauthorised personnel.

- Measuring distances
- Tilt measurement
- Data transfer with Bluetooth® and WIFI

## Prohibited use

- Using the product without instruction
- Using outside the stated limits
- Deactivation of safety systems and removal of explanatory and hazard labels
- Opening of the equipment by using tools (screwdrivers, etc.)
- Carrying out modification or conversion of the product
- Use of accessories from other manufacturers without express approval
- Deliberate dazzling of third parties; also in the dark
- Inadequate safeguards at the surveying site (e.g. when measuring on roads, construction sites, etc.)
- Deliberate or irresponsible behaviour on scaffolding, when using ladders, when measuring near machines which are running or near parts of machines or installations which are unprotected
- Aiming directly in the sun

⚠ **WARNING**
Watch out for erroneous measurements if the instrument is defective or if it has been dropped or has been misused or modified. Carry out periodic test measurements.

Particularly after the instrument has been subject to abnormal use, and before, during and after important measurements.

⚠ **CAUTION**
Never attempt to repair the product yourself. In case of damage, contact a local dealer.

⚠ **WARNING**
Changes or modifications not expressly approved could void the user's authority to operate the equipment.

## Limits of use

ℹ Refer to section "Technical data".
The device is designed for use in areas permanently habitable by humans. Do not use the product in explosion hazardous areas or in aggressive environments.

## Disposal

⚠ **CAUTION**
Flat batteries must not be disposed of with household waste. Care for the environment and take them to the collection points provided in accordance with national or local regulations.

The product must not be disposed with household waste.

Dispose of the product appropriately in accordance with the national regulations in force in your country.

Adhere to the national and country specific regulations.

Product specific treatment and waste management can be downloaded from our homepage.

## Electromagnetic Compatibility (EMC)

⚠ **WARNING**
The device conforms to the most stringent requirements of the relevant standards and regulations.

Yet, the possibility of causing interference in other devices cannot be totally excluded.

## FCC statement (applicable in U.S.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

• This device may not cause harmful interference, and

• this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

• This device may not cause interference and

• this device must accept any interference, including interference that may cause undesired operation of the device.

## Déclaration FCC, applicable aux Etats-Unis

Ce produit a été testé et ses limites ont été jugées conformes à celles prescrites pour les dispositifs numériques de classe B, décrites dans le paragraphe 15 des règles FCC. Ces limites ont pour but de fournir une protection raisonnable contre des interférences nocives dans une installation résidentielle. Les appareils de ce type génèrent, utilisent et peuvent rayonner de hautes fréquences. Ils sont de ce fait susceptibles de perturber la réception radiophonique en cas d'installation non conforme aux instructions.

Même en cas de respect des instructions, l'absence d'interférences dans une installation particulière ne peut cependant être garantie. Si cet instrument perturbe la réception radiophonique ou télévisuelle, ce que l'on constate en éteignant puis en rallumant l'instrument, l'utilisateur peut tenter de corriger ces interférences en appliquant les mesures suivantes :

• Réorienter ou repositionner l'antenne de réception.

• Augmenter la distance entre l'instrument et le récepteur.

• Connecter l'instrument à un autre circuit que celui du récepteur.

• Consulter le revendeur ou un technicien expérimenté dans le domaine radio/TV.

Cet appareil est conforme à la section 15 des règlements FCC. Son fonctionnement est soumis aux deux conditions suivantes :

- cet appareil ne doit pas causer d'interférences nuisibles, et
- cet appareil doit accepter toute autre interférence reçue, y compris les interférences pouvant entraîner un fonctionnement non désiré.

Ce dispositif est conforme à la norme RSS-210 d'Industrie Canada. L'utilisation est sujette aux deux conditions suivantes :

- ce dispositif ne pas doit pas être la source d'interférences nuisibles, et
- ce dispositif doit accepter toutes les interférences, y compris les interférences pouvant induire des opérations non souhaitées.

## Normativa FCC (aplicable en EE UU)

Las pruebas efectuadas han puesto de manifiesto que este equipo se atiene a los valores límite, determinados en la sección 15 de la normativa FCC, para instrumentos digitales de la clase B. Esto significa que el instrumento puede emplearse en las proximidades de lugares habitados, sin que su radiación resulte molesta. Los equipos de este tipo generan, utilizan y emiten una frecuencia de radio alta y, en caso de no ser instalados conforme a las instrucciones, pueden causar perturbaciones en la recepción radiofónica.

En todo caso, no es posible excluir la posibilidad de que se produzcan perturbaciones en determinadas instalaciones.

Si este equipo causa perturbaciones en la recepción radiofónica o televisiva, lo que puede determinarse al apagar y volver a encender el equipo, el operador puede intentar corregir estas interferencias de la forma siguiente:

- cambiando la orientación o la ubicación de la antena receptora.
- aumentando la distancia entre el instrumento y el receptor.
- conectando el instrumento a un circuito distinto al del receptor.
- asesorándose por el vendedor o algún técnico de radio-televisión.

## Use of the product with Bluetooth®

⚠ **WARNING**

Electromagnetic radiation can cause disturbances in other equipment, in installations (e.g. medical ones such as pacemakers or hearing aids) and in aircraft. It can also affect humans and animals.
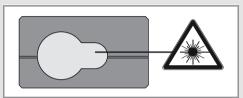
**Precautions:**

Athough this product conforms to the most stringent standards and regulations, the possibility of harm to people and animals cannot totally excluded.

- Do not use the product near petrol stations, chemical plants, in areas with a potentially explosive atmosphere and where blasting takes place.
- Do not use the product near medical equipment.
- Do not use the product in airplanes.
- Do not use the product near your body for extended periods.

### Laser classification



The device produces visible laser beams, which are emitted from the instrument:

It is a Class 2 laser product in accordance with:

- IEC60825-1 : 2014 „Radiation safety of laser products"

**Laser Class 2 products:**

Do not stare into the laser beam or direct it towards other people unnecessarily. Eye protection is normally afforded by aversion responses including the blink reflex.
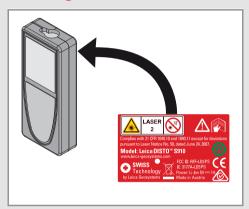
⚠ **WARNING**
Looking directly into the beam with optical aids (e.g. binoculars, telescopes) can be hazardous.

⚠ **CAUTION**
Looking into the laser beam may be hazardous to the eyes.

| Description | Value |
|---|---|
| Wavelength | 620 - 690 nm |
| Maximum radiant output power for classification | 0.95 mW |
| Pulse repetition frequency | 320 MHz |
| Pulse duration | > 400 ps |
| Beam divergence | 0.16 x 0.6 mrad |

### Labelling



Subject to change (drawings, descriptions and technical data) without prior notice.