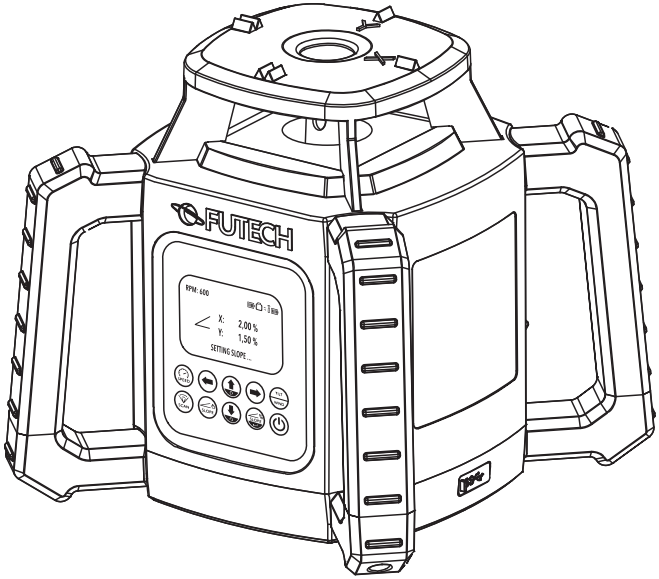
USER MANUAL

052.05R PARA DS RED
052.05G PARA DS GREEN



EN ENGLISH

Manual
in your language?

Check the back cover

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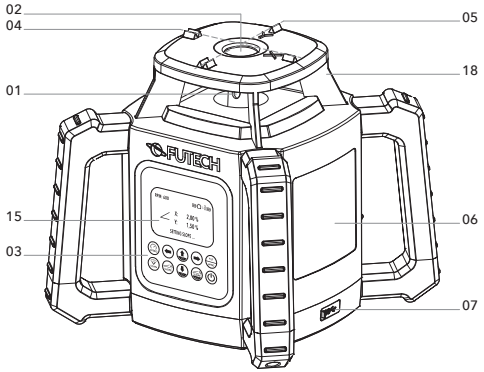
OVERVIEW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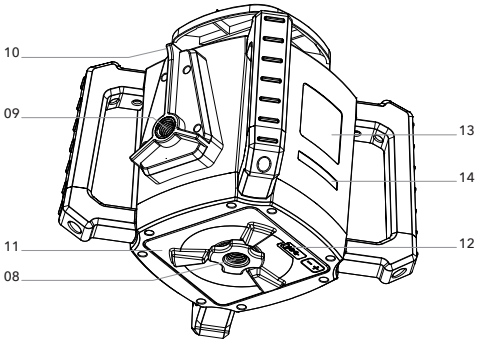
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PARA DS
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SPEED
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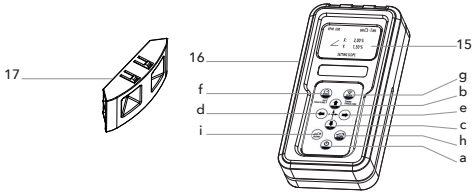
SLOPE
SLOPE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HOUSING

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KEYPAD

A Power button
B Arrow UP button / Turn RIGHT button
C Arrow DOWN button / Turn LEFT button
D Arrow LEFT button
E Arrow RIGHT button
F Speed button
G Scan button
H Tilt/Wind button
I Manual slope button
J Digital slope button / Confirm button

REMOTE CONTROL

a Power / standby button
b Arrow UP button / Turn RIGHT button
c Arrow DOWN button / Turn LEFT button
d Arrow LEFT button
e Arrow RIGHT button
f Speed button / Tilt button
g Scan button / Wind button
i Manual slope button
j Digital slope button / Confirm button

QUICK START GUIDE

KEYPAD	REMOTE CONTROL	NAME	FUNCTION	
A	a	Power button	Press	Switch ON/OFF the device.
B	b	Arrow UP button / Turn RIGHT button	Press (Man. slope, H)	Change the slope. Y-axis rises on the side indicated by the arrow.
			Press (Man. slope, V)	Change the slope. Z-axis rises.
			Press (Digital slope)	Increase the slope of the Y-axis.
			Press (Scan or RPM=0)	Turn the laser anti clockwise.
C	c	Arrow DOWN button / Turn LEFT button	Press (Man. slope, H)	Change the slope. Y-axis descends on the side indicated by the arrow.
			Press (Man. slope, V)	Change the slope. Z-axis descends.
			Press (Digital slope)	Reduce the slope of the Y-axis.
			Press (Scan or RPM=0)	Turn the laser clockwise.
D	d	Arrow LEFT button	Press (Man. slope, H)	Change the slope. X-axis rises on the side indicated by the arrow.
			Press (Man. slope, V)	Move the laser line and dot (z-axis) to the left.
			Press (Digital slope)	Reduce the slope of the X-axis.
E	e	Arrow RIGHT button	Press (Horizontal mode)	Change the slope. X-axis descends on the side indicated by the arrow.
			Press (Vertical mode)	Move the laser line and dot (z-axis) to the right.
			Digital slope	Increase the slope of the X-axis.

KEYPAD	REMOTE CONTROL	NAME	FUNCTION	
F	f	Speed button	Press	Change spinning speed 0 – 120 – 300 – 600 – 800 RPM
G	g	Scan button	Press	Use and change scan modus 0° - 10° - 45° - 90° - 180°
H	f / g	Tilt / Wind button	Press H or hold f	Switch ON/OFF Tilt security
			Hold H or hold g	Switch ON/OFF Wind function
I	i	Manual slope button	Press	Switch ON/OFF Manual slope function
J	j	Digital slope button / Confirm button	Press	Switch ON/OFF Digital slope function.
			Press (after setting %)	Confirm and set the slope %.

SAFETY

Please read the safety instructions provided as a separate booklet with the device.

LASER RADIATION – Class 2 Laser product. – Do not stare into beam

FIRST TIME USAGE

Remove all protection foils.

Place the provided LI-ION battery in the device. Make sure the batteries are fully charged. The four LEDs of the battery indicator light up green.

Place 2x AA Alkaline batteries in the remote control.

BATTERY AND CHARGER

Laser:

This laser works with a 3.7V - 8000mAh LI-ION battery. To charge this battery, you can use the provided 12V - 3A charger for fast charging.

Remote control:

The remote control works with 2x 1.5V AA Alkaline batteries.

AUTOMATIC FUNCTIONS

AUTO-LEVELLING

This rotation laser first levels itself automatically after turning on the device. After being levelled, the laser starts spinning. The laser can level itself within an operating angle of approx. 5°. The auto-levelling system performs the necessary fine adjustments, with the help of 3 electronic measuring sensors, one for each axis (X, Y and Z).

DIGITAL SLOPE

There are 3 different manners of using the slope function of the Para DS: MANUAL (physically tilt the device), ELECTRONIC (manually, using the levelling motors) and DIGITAL (set % using the leveling motors). This last one is the most advanced way to use the slope function.

Digital slope allows you to enter a known slope percentage on the laser's remote control, for both the X and Y axes. Once confirmed, the laser will automatically set itself to the correct slope.

TILT SECURITY

The tilt-security avoids measuring errors. By default, the laser will be active with the tilt-security activated. After turning on the laser or after activating the tilt-security, the tilt-security will be prepared for 60 seconds. During this time you can install the laser in the correct position. 60 seconds after you hit the last button, the tilt-security is active.

When the tilt-security sensors detect a small shock (e.g. a vibration, a gust of wind, ...) the laser will stop turning and starts flashing and beeping. This give you the opportunity to check if the laser is still in the correct position after the shock. You must exit the tilt function, check if the laser is still in the correct position and restart the Tilt security to continue. A new preparation process of approx. 60 seconds will start before the Tilt security is active.

NOTE

Tilt-security is the best choice if accuracy is the most important.

BASIC MODE (TILT-SECURITY AND WIND FUNCTION OFF)

In the basic mode the laser will stop spinning if the sensors detect a slight shock, such as a vibration or gust of wind. The laser will re-level automatically and start spinning again when it is levelled again.

NOTE

This function is a compromise between accuracy and efficiency.

WIND FUNCTION

The wind function is often used when you need to work on a vibrating surface, or in windy conditions. Also, when quick levelling is needed. The laser doesn't stop spinning when the wind function is active, even if the sensors detect slight shocks. The levelling takes place while the laser is spinning. You can continue to work.

IMPORTANT NOTE

Keep in mind that this is the least accurate method of working. Measurement errors can occur.

USE

- Press the power button **[A]** to activate the device.
- Press the power / standby button **[a]** to activate the remote control.

It is possible to set the device in "Standby". In this case the settings (slope,...) will be preserved during inactivity. Standby mode can only be activated with the remote control.

- Hold the power / standby button **[a]** to activate (or deactivate) the standby mode.

NOTE

The choice of the tripod defines in a large way the user-friendliness of the device.

If the workplace has a high light intensity, for example when working outside in a sunny area, you will need a laser receiver to detect the laser beam.

In case there is no connection between the laser and the remote control, the LCD screen of the remote control shows "NO CONNECTION".

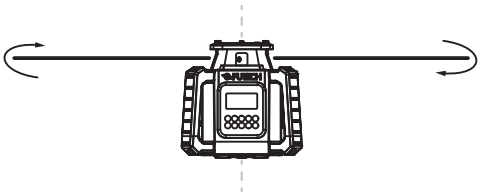
NO CONNECTION

WHAT IF MY (NEW) REMOTE CONTROL DOES NOT COMMUNICATE WITH MY DEVICE?

In normal circumstances, the supplied remote control is paired with the device. In exceptional cases, or when you need to replace the remote control, you can pair it as follows:

1. Power On the laser device and the remote control pressing there power buttons **[A, a]**
2. Hold the power button **[A]** of the laser for approx. 3 seconds until the connection symbols, a laser and blinking remote, appears on the screen.
3. Hold the manual slope button **[I]** for approx. 3 seconds until "connecting" appears on the LCD screen of the remote control.
4. When paired, "connected" is shown under the connection symbols on the LCD screen of the remote and the remote symbol on screen is no longer blinking.
5. Shut down and re-activate both the device and the remote control pressing there-power buttons **[A, a]** twice.

■ HORIZONTAL ALIGNMENT



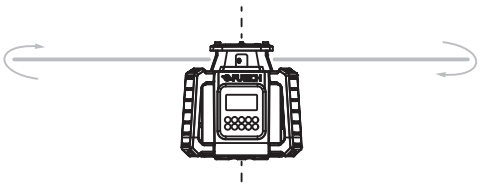
After turning on the device, the laser light blinks without spinning. “Levelling” is shown on the LCD screen **[15]**. When levelled, the LCD screen **[15]** shows “Levelled” and the laser beam will light continuously. The laser will start spinning at 600 rotations per minute, the optimal speed for usage with a receiver.

By default, the Tilt security will prepare after turning on the device.

NOTE

The device should not be placed on a surface with a slope of more than 5°. If this is the case, the laser is outside the self-levelling range, in which case the laser diode will continue to blink. The LCD screen **[15]** shows “Out of levelling range”.

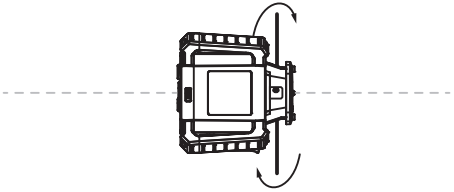
■ PLUMB LINE



Thanks to the plumb line, which is projected via Plumb point up **[02]** and Plumb point down **[08]**, this device can also be used to bring a plumb lead point of the floor to the ceiling, or visa versa.

- Mark the starting point.
- Place the laser beam exactly on this starting point. (We recommend to use a tripod)
- Wait until the laser is levelled.
- Now you can mark the opposite plumb point accordingly.

■ VERTICAL ALIGNMENT

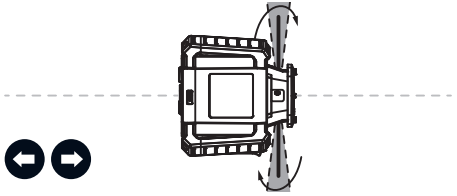


Put the device on its feet vertical mode **[10]** for vertical alignment (keypad should be at the top). "Levelling" appears on the LCD display **[15]**. When levelled, "Levelled" appears on the LCD screen **[15]**, the laser beam will light continuously and the laser will start spinning at 600 rotations per minute, the optimal speed for usage with a receiver.

NOTE

The device should not be placed on a surface with a slope of more than 5°. If this is the case, the laser is outside the self-levelling range, in which case the laser diode will continue to blink. The LCD screen **[15]** shows "Out of levelling range".

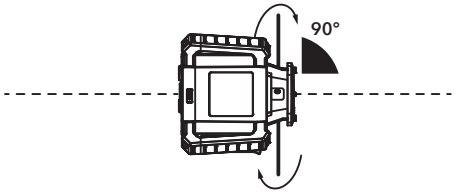
▪ POSITIONING THE VERTICAL LASER LINE



In vertical alignment mode, the laser can be positioned exactly. The laser will continue to level while positioning the vertical laser line.

- Use the arrow LEFT button **[D, d]** or arrow RIGHT button **[E, e]** to move the vertical laser line.

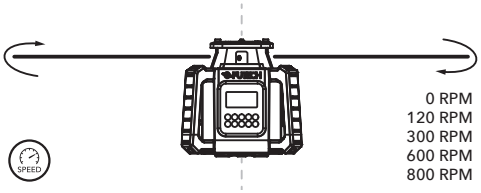
▪ CORNERS OF 90°



In vertical position, it is possible to project corners of 90°.

- Place the laser head **[01]** as precise as possible above the starting point, the place where the corner of 90° is made.
  It can be helpful to change the spinning speed to zero when positioning the laser above the starting point.
- Bring the rotating laser beam with the help of the arrow LEFT button **[D, d]** or arrow RIGHT button **[E, e]** to your first mark.
- The Plumb point up **[02]** (and Plumb point down **[08]**) each show a corner of 90° with the rotating laser line.

■ SPINNING SPEED



This device has multiple spinning speeds. 0, 120, 300, 600 and 800 RPM (rotations per minute). The default rotation speed is 600 RPM.

· Press the speed button **[F, f]** to select the desired speed. Each time you press this button, the speed will change.
600 - 800 - 0 - 120 - 300 - 600 - 800 - …

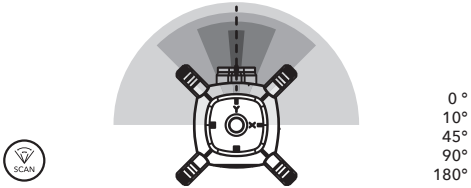
A speed of 0 RPM projects a stationary laser point. This can be positioned exactly at the measuring point with the turn LEFT button **[C, c]** or turn RIGHT button **[B, b]** button.

NOTE

The slower the rotational speed, the better the visibility with the human eye. A faster rotation speed is necessary to use a laser receiver

(600 RPM recommended for handheld receivers, 800 RPM recommended for machine receiver)

■ SCAN FUNCTION



The scan function allows to limit the laser beam to an angle instead of the complete 360° circle. This creates a light intensive segment that increase the visibility for the human eye.

Possible angles of the scan function are 0°, 10°, 45°, 90° and 180°.

· Press the scan button **[G, g]** to select the desired angle of the scan function. Each time you press this button, the angle will change.
0° - 10° - 45° - 90° - 180° - 0° - 10° - …

You can move the position of the light intensive segment by pressing the turn LEFT button **[C, c]** or turn RIGHT button **[B, b]** button.

■ TILT SECURITY

TILT security avoids measuring errors when the tilt security detector had detected a small shock (e.g. a vibration, a gust of wind, ...).

NOTE

Tilt security will be activated automatically after turning on the laser device. The first step below can be skipped in this case.

· Press the Tilt/Wind button **[H]** or Hold the Speed button/Tilt button **[g]** to activate the Tilt security.

The laser prepares the Tilt security during about 60 seconds. "TILT" is flashing on top of the LCD screen **[15]** during this preparation.
After this preparation the Tilt security is active and the LCD screen **[15]** shows "TILT" permanently.

When the tilt security sensors detect a shock (e.g. a vibration, a gust of wind, ...) the laser will stop spinning and "TILT ALARM" will flash on the LCD screen **[15]**.

When this happens, you need to check if the laser is still in its correct position.

· Deactivate the Tilt security pressing the Tilt/Wind button **[H]** or holding the Speed/Wind button **[f]**.

The laser will start levelling and spinning again.

· Position the laser back in its correct position for your measurement.

· Restart the Tilt security pressing the Tilt/Wind button **[H]** or holding the Speed/Wind button **[f]**.

A new countdown of approx. 60 seconds will start to start the tilt security. After this countdown the Tilt security is active.

At any time when the tilt security is active, or during the start-up countdown, you can choose to disable it.

· When Tilt security is starting or is active, press the Tilt/Wind button **[H]** or hold the Speed/Wind button **[f]** to deactivate this function. "TILT OFF" appears on the LCD screen **[15]** and "TILT" will be no longer visible.

■ WIND FUNCTION

The wind function is often used when you need to work on a vibrating surface or in windy conditions.

· Activate the Wind function by holding the Tilt/Wind button **[H]** or the Scan/Wind button **[g]** for approx. 3 seconds until "Wind On" appears on the screen.

"WIND" can be read at the top of the LCD screen **[15]**. The laser will continue to rotate and constantly level itself even when a slight shock is detected by the sensors.

NOTE

Keep in mind that this is the least accurate method of working. **Measurement errors can occur!**

· Deactivate the Wind function by holding the Tilt/Wind button **[H]** or the Scan/Wind button **[g]** for approx. 3 seconds until "Wind Off" appears on the LCD screen **[15]** and "WIND" will no longer be visible.

■ BASIC MODE

When both Tilt security and Wind function are switched off, the laser device will use the Basic function.

After levelling, the laser starts spinning. When the sensors detect a slight shock, such as a vibration or a gust of wind, the laser will stop spinning and start to re-levelling itself. "LEVELLING" can be read on the LCD screen **[15]**. When the laser is levelled, "LEVELLED" can be read and the laser will start spinning again.

■ SLOPE FUNCTIONS

Standard, the instrument shows a 100% horizontal or vertical laser beam. When needed, the laser can project a sloped laser beam.

There are 3 types of slopes that can be used: digital slope, electronic slope, manual slope.

To set up slopes, you must take a few steps in the right order.

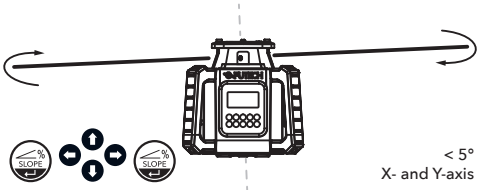
NOTE

Keep in mind that auto-levelling is disabled when working with the slope function.

LASER LINES ARE NO LONGER LEVELLED !

DIGITAL SLOPE, HORIZONTAL, <5°

Use digital slope when you know the percentage of slope you need to set. (for example: 2% for drainage)



< 5°
X- and Y-axis

- Place the laser in its horizontal (normal) position.
- Position the x-axis **[04]** and y-axis **[05]** of the laser device (shown on the metal window cover **[18]**) exactly in the parallel with the direction of the slope(s) you want to make.
- Turn on the device and wait until it is levelled

"Levelled" is visible on the LCD screen **[15]**.

- Activate the Digital slope function with the digital slope button **[J, j]**.

The LCD screen **[15]** shows a percentage for X- and Y-axis. Both percentages can be set as desired. First choose the desired slope percentage:

- Reduce the slope percentage for the X-axis using the Arrow LEFT button **[D, d]**.
- Increase the slope percentage for the X-axis using the Arrow RIGHT button **[E, e]**.
- Reduce the slope percentage for the Y-axis using the Arrow DOWN button **[C, c]**.
- Increase the slope percentage for the Y-axis using the Arrow UP button **[B, b]**.

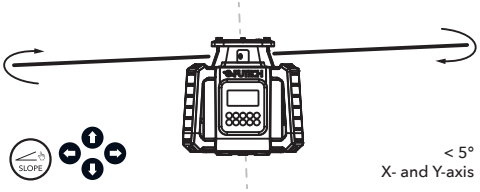
When the desired slope is shown on the LCD screen, it needs to be confirmed before the laser will set into the selected slope.

- Press the Digital slope button / Confirm button **[J, j]** to confirm the choosen slope percentage.

The laser will now set the desired slope. The laser stops spinning, "Setting slope..." is visible on the LCD screen **[15]**. When this is done "Slope is set" is visible on the LCD screen **[15]** and the laser starts spinning under the desired slope.

- Deactivate the digital slope function again by pressing the digital slope button **[J, j]**. "Levelling" appears on the LCD screen **[15]**.

ELECTRONIC SLOPE, HORIZONTAL, <5°



< 5°
X- and Y-axis

· Place the laser in its horizontal (normal) position.

· Position the x-axis [04] and y-axis [05] of the laser device (shown on the metal window cover [18]) exactly in the parallel with the direction of the slope(s) you want to make.

· Turn on the device and wait until it is levelled

"Levelled" is visible on the LCD screen [15].

· Choose a distance in the direction of the slope that needs to be set up. (e.g. 10m)

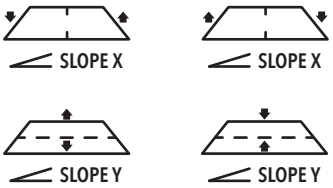
· Place the receiver by means of the measuring rod holder on a measuring rod and slide the receiver until the laser beam is at the zero level of the receiver.

· Activate the manual slope function with the Manual slope button [I, i].

"Slope" appears on the LCD screen [15].

· Next, you position the receiver at the desired slope. (e.g. 2% slope on 10m = height difference of 20cm up or down)

· Search the zero level of the receiver with the laser beam using OR the arrow UP [B, b] or DOWN [C, c] button (for a slope on the Y-axis) OR the arrow LEFT [D, d] / RIGHT [E, e] button (for a slope on the X-axis)

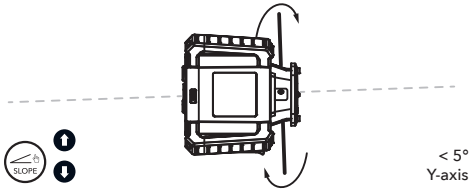


The LCD screen [15] shows how the laser lines will react when using the arrow buttons.

When the laser line hits the zero level of the receiver, you reached the desired slope.

· Deactivate the manual slope pressing the Manual slope button [I, i].

ELECTRONIC SLOPE,VERTICAL SLOPE, <5°



· Place the laser in its vertical position (on the feet vertical mode[10]).

· Turn on the device and wait until it is levelled

"Levelled" is visible on the LCD screen [15].

· Activate the manual slope function with the slope button [I, i].

"Slope" appears on the LCD screen [15].

· Use the arrow UP [B, b] or DOWN [C, c] button to set a slope on the vertical line.

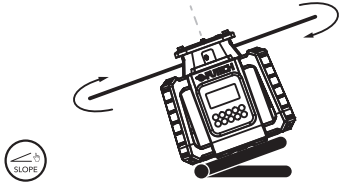
· If you want, you can reposition the vertical line using the arrow LEFT [D, d] or RIGHT [E, e] button.

Your laser is set with the desired slope.

· Deactivate the manual slope pressing the Manual slope button [I, i].

MANUAL SLOPE, HORIZONTAL, >5°

Steeper slopes, slopes outside the laser leveling range, can be set using a slope adapter, which is available as optional accessory.



> 5°

In case you use this slope adapter:

· Place the laser in its horizontal (normal) position on the slope adapter. Make sure the slope adapter is at is 0% position.

· Position the laser in the correct axis-direction, parallel with the slope line you like to make.

· Turn on the device and wait until it is levelled

"Levelled" is visible on the LCD screen [15].

· Activate the manual slope function with the slope button [I, i].

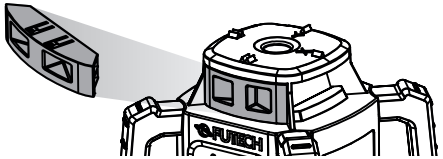
"Slope" appears on the LCD screen [15].

· Set the slope adapter in the desired slope. (Percentage of slope is normally marked on the slope adapter)

Your laser is set with the desired slope.

· Deactivate the manual slope pressing the Manual slope button [I, i].

ANTI-REFLECTION



In some cases, unwanted reflections may occur while using a laser, for example when the laser beam shines on glass. This can lead to inaccurate measurement results and affect the proper functioning of the laser receiver.

It is possible to shield part of the laser beam along the side where the reflection may occur. To do this, use the supplied anti reflection clip **[16]** by sliding them into the metal window cover **[17]**.

Simply remove this anti reflection clip **[16]** when covering is no longer needed.

SPECIFICATIONS

	052.05R PARA DS RED	052.05G PARA DS GREEN
Visibility		
Precision	1mm / 10m	
Range (with receiver)	2x ± 300m	
Dust- and water resistance	IP65	
Levelling	Motorised	
Plumb bob	✔	
Rotations per minute	0, 120, 300, 600, 800	
Scan function	0°, 10°, 45°, 90°, 180°	
Wind function	✔	
Tilt security	✔	
Self-levelling range	± 5°	
Slope function	Manually, Electronic, Digital	
Maximum settable slope (X- and Y-axis)	± 5°	
Remote control	✔ (RF)	
Built-in screw (for tripod)	5/8" (horizontal mode) - 5/8" (vertical mode)	
AC power connector	USB-C	
Battery	LI-ION - 3.7V - 8000 mAh	
AC power adapter (charger)	12V, 2A	
Laser	Class 2, 635nm, <1mW max. output (downpoint: Class 2, 650nm, <1mW)	Class 2, 515nm, <1mW max. output (downpoint: Class 2, 650nm, <1mW)
D x W x H device	220 x 220 x 218 mm	
Weight (with battery placed)	2,76 kg	

DECLARATION OF CONFORMITY

Futech (Belgium) declares under its own responsibility that this device:

- 052.05R, PARA DS RED
- 052.05G, PARA DS GREEN

is in conformity with the standards

EN 61000-6-3:2007+A1:2011,
EN 61000-6-1:2007,
EN 60825-1:2014,
EN 61010-1:2010,

following the provisions of Directive(s)

2014/30/EU,
2014/35/EU.

Lier, Belgium,
July 18, 2023
Patrick Waûters

NOTES

USER MANUAL

other languages:

DA DANSK

DE DEUTSCH

ES ESPAÑOL

ET EESTI KEEL

FI SUOMEN KIELI

FR FRANÇAIS

IS ÍSLENSKA

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NL NEDERLANDS

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