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Entsorgung

Messwerkzeuge, Zubehör und Verpackungen sollen einer umweltgerechten Wiederverwertung zugeführt werden.

Werfen Sie Messwerkzeuge nicht in den Hausmüll!

Nur für EU-Länder:



Gemäß der europäischen Richtlinie 2012/19/EU müssen nicht mehr gebrauchsfähige Messwerkzeuge und gemäß der europäischen Richtlinie 2006/66/EG müssen defekte oder verbrauchte Akkus/Batterien getrennt gesammelt und einer umweltgerechten Wiederverwendung zugeführt werden.

Nicht mehr gebrauchsfähige Akkus/Batterien können direkt abgegeben werden bei:

Deutschland

Recyclingzentrum Elektrowerkzeuge
Osteroder Landstraße 3
37589 Kalefeld

Schweiz

Batrec AG
3752 Wimmis BE

Änderungen vorbehalten.

English

Safety Notes



All instructions must be read and observed in order to work safely with the measuring tool. The integrated protections in the measuring tool may be compromised if the measuring tool is not used in accordance with the instructions provided. Never make warning signs on the measuring tool unrecognisable. **STORE THESE INSTRUCTIONS IN A SAFE PLACE AND INCLUDE THEM WITH THE MEASURING TOOL WHEN GIVING IT TO A THIRD PARTY.**

26 | English

- ▶ **Caution - The use of other operating or adjusting equipment or the application of other processing methods than those mentioned here can lead to dangerous radiation exposure.**
- ▶ **The measuring tool is provided with a warning label (marked with number 7 in the representation of the measuring tool on the graphics page).**



- ▶ **If the text of the warning label is not in your national language, stick the provided warning label in your national language over it before operating for the first time.**



Do not direct the laser beam at persons or animals and do not stare into the direct or reflected laser beam yourself, not even from a distance. You could blind somebody, cause accidents or damage your eyes.

- ▶ **If laser radiation strikes your eye, you must deliberately close your eyes and immediately turn your head away from the beam.**
- ▶ **Do not make any modifications to the laser equipment.**
- ▶ **Do not use the laser viewing glasses as safety goggles.** The laser viewing glasses are used for improved visualisation of the laser beam, but they do not protect against laser radiation.
- ▶ **Do not use the laser viewing glasses as sun glasses or in traffic.** The laser viewing glasses do not afford complete UV protection and reduce colour perception.
- ▶ **Have the measuring tool repaired only through qualified specialists using original spare parts.** This ensures that the safety of the measuring tool is maintained.
- ▶ **Do not allow children to use the laser measuring tool without supervision.** They could unintentionally blind other persons or themselves.
- ▶ **Do not operate the measuring tool in explosive environments, such as in the presence of flammable liquids, gases or dusts.** Sparks can be created in the measuring tool which may ignite the dust or fumes.
- ▶ **Caution! When using the measuring tool with Bluetooth®, interference with other devices and systems, airplanes and medical devices (e. g., cardiac pacemakers, hearing aids) may occur. Also, the possibility of humans and animals**

in direct vicinity being harmed cannot be completely exempt. Do not use the measuring tool with *Bluetooth*® in the vicinity of medical devices, petrol stations, chemical plants, areas where there is danger of explosion, and areas subject to blasting. Do not use the measuring tool with *Bluetooth*® in airplanes. Avoid operation in direct vicinity of the body over longer periods.

- ▶ Do not use the measuring tool if the touchscreen is visibly damaged (e. g. cracks in the surface etc.).

The *Bluetooth*® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Robert Bosch GmbH is under license.

Product Description and Specifications

Intended Use

The measuring tool is intended for measuring distances, lengths, heights, clearances and inclines, and for calculating areas and volumes.

The measuring results can be transferred to other devices via *Bluetooth*®.

The help function integrated into the measuring tool provides detailed animations about individual measuring functions/procedures.

Technical Data

Digital Laser Measure	PLR 50 C
Article number	3 603 F72 2..
Distance measurement	
Measuring range	0.05 – 50 m ^{A)}
Measuring accuracy (typical)	± 2.0 mm ^{B)}
Lowest indication unit	0.1 mm
Inclination measurement	
Measuring range	0° – 360° (4x90°)
Measuring accuracy (typical)	± 0.2° ^{C)/E)}
Lowest indication unit	0.1°
General	
Operating temperature	– 10 °C ... + 50 °C ^{D)}
Storage temperature	– 20 °C ... + 70 °C
Relative air humidity, max.	90 %

28 | English

Digital Laser Measure		PLR 50 C
Laser class		2
Laser type		635 nm, < 1 mW
Laser beam diameter (at 25 °C) approx.		
– at 10 m distance		9 mm
– at 50 m distance		45 mm
Automatic switch-off after approx.		
– Laser		20 s
– Measuring tool (without measurement)		5 min
– <i>Bluetooth</i> [®] (if inactive)		3 min
Weight according to EPTA-Procedure 01:2014		0.16 kg
Dimensions (length x width x height)		115 x 50 x 23 mm
Batteries		3 x 1.5 V LR03 (AAA)
Battery life, approximately		
– Individual measurements		10000 ^{E) G)}
– Continuous measurement		2.5 h ^{E) G)}
Data transmission		
<i>Bluetooth</i> [®]		<i>Bluetooth</i> [®] 4.0 (Classic and Low Energy) ^{F)}

A) For measurements from the rear measuring-tool edge. The working range increases depending on how well the laser light is reflected from the surface of the target (scattered, not reflective) and the brighter the laser point is to the ambient light intensity (interior spaces, twilight). For distances of less than 20 m a retro-reflective target plate should not be used, as it can lead to measurement errors.

B) For measurements from the rear measuring-tool edge, 100 % reflectance of the target (e.g., a white-painted wall), weak backlight and 25 °C operating temperature. Additionally, a deviation influence of ±0.05 mm/m must be taken into account.

C) After calibration at 0 ° and 90 ° with an additional grade error of ±0.01 °/degree to 45 ° (max.).

D) In the continuous measurement function, the maximum operating temperature is +40 °C.

E) At 25 °C operating temperature

F) For *Bluetooth*[®] low energy devices, establishing a connection may not be possible, depending on model and operating system. *Bluetooth*[®] devices must support the SPP profile.

G) *Bluetooth*[®] deactivated



The measuring tool can be clearly identified with the serial number **6** on the type plate.

Declaration of Conformity

We declare under our sole responsibility that the product described under "Technical Data" complies with all applicable provisions of the directives 1999/5/EC and 2011/65/EU including their amendments and is in conformity with the following standards: EN 61010-1: 2010-10, EN 60825-1: 2014-08, EN 300 328 V1.8.1: 2012-06, EN 301 489-1 V1.8.1: 2008-04, EN 301 489-1 V1.9.2: 2011-09, EN 301 489-17 V2.2.1: 2012-09, EN 62479: 2010-09.

Technical documents at:
Robert Bosch GmbH, PT/ETM9,
70764 Leinfelden-Echterdingen, GERMANY

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PPa.
 i.V. 

Robert Bosch GmbH, Power Tools Division
70764 Leinfelden-Echterdingen, GERMANY
Leinfelden, 20.08.2015


Product Features


The numbering of the product features shown refers to the illustration of the measuring tool on the graphic page.

- 1 Measuring button/On/Off button
- 2 Touchscreen
- 3 Positioning plate
- 4 Battery lid
- 5 Latch of battery lid
- 6 Serial number
- 7 Laser warning label
- 8 Laser beam outlet
- 9 Reception lens
- 10 Laser viewing glasses*
- 11 Laser target plate*
- 12 Protective pouch


30 | English


Display elements (selection)**a** Status *Bluetooth*[®]


 *Bluetooth*[®] activated, no connection established


 *Bluetooth*[®] activated, connection established


b Temperature warning**c** Battery indicator**d** Laser switched on**e** Button for reference level of measurement**f** Previous measured values**g** Reading**h** Delete button**i** Menu button**j** *Bluetooth*[®] button**k** Measuring functions button


 Length measurement


 Area/surface measurement


 Volume measurement

 Addition/subtraction of lengths


 Addition/subtraction of areas

 Addition/subtraction of volumes


 Indirect height measurement

 Indirect length measurement

 Double indirect height measurement

 Inclination Measurement

 Digital Spirit Level

 Continuous measurement

l Help function button**m** Scroll up/down button**n** Back button

- o Settings button
- p Measured-value list button

*The accessories illustrated or described are not included as standard delivery.


Assembly

Inserting/Replacing the Batteries

Using alkali-manganese or rechargeable batteries is recommended for operation of the measuring tool.

Less measurements are possible when using 1.2 V rechargeable batteries than with 1.5 V batteries.

To open the battery lid **4**, fold out the positioning plate **3**, press the latch **5** in the direction of the arrow and remove the battery lid. Insert the batteries/rechargeable batteries. When inserting, pay attention to the correct polarity according to the representation on the inside of the battery compartment.

If the battery symbol  first appears in the display, then at least 100 measurements are still possible. When the battery symbol is empty, you have to replace the batteries/rechargeable batteries because measurements are no longer possible.

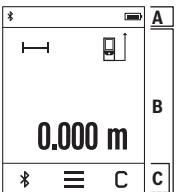
Always replace all batteries/rechargeable batteries at the same time. Do not use different brands or types of batteries/rechargeable batteries together.

► **Remove the batteries/rechargeable batteries from the measuring tool when not using it for longer periods.** When storing for longer periods, the batteries/rechargeable batteries can corrode and self-discharge.

Operation

Using the Touchscreen

► **Do not use the measuring tool if the touchscreen is visibly damaged (e. g. cracks in the surface etc.).**

 The display is divided into the Status bar (A), Touchscreen (B) and Menu bar (C) sections. The status bar shows the *Bluetooth*® connection status, the temperature warning and the charging state of the batteries/rechargeable batteries. The measuring tool can be controlled by touching the buttons on the touchscreen.

32 | English

The menu bar provides additional functions (e.g. *Bluetooth*® on/off, menu, delete).

- ▶ Use only your fingers to operate the touchscreen.
- ▶ Lightly tap the corresponding button. Do not apply high pressure or use sharp objects to tap the touchscreen.
- ▶ Do not bring the touchscreen into contact with other electrical devices or water.
- ▶ To clean the touchscreen, switch the measuring tool off and wipe off dirt using, for example, a microfibre cloth.

Initial Operation

- ▶ **Do not leave the switched-on measuring tool unattended and switch the measuring tool off after use.** Other persons could be blinded by the laser beam.
- ▶ **Protect the measuring tool against moisture and direct sun light.**
- ▶ **Do not subject the measuring tool to extreme temperatures or variations in temperature.** As an example, do not leave it in vehicles for a long time. In case of large variations in temperature, allow the measuring tool to adjust to the ambient temperature before putting it into operation. In case of extreme temperatures or variations in temperature, the accuracy of the measuring tool can be impaired.
- ▶ **Avoid heavy impact to or falling down of the measuring tool.** After severe exterior effects to the measuring tool, it is recommended to carry out an accuracy check (see “Accuracy Check and Calibration of the Grade Measurement” and “Accuracy Check of the Distance Measurement” on page 40) each time before continuing to work).

Switching On and Off

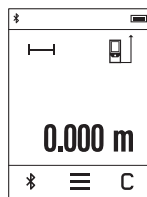
To **switch on** the measuring tool, briefly press the measuring button **1**. When the measuring tool is switched on, the laser beam is not yet switched on.

To **switch off** the measuring tool, press the measuring button **1** and hold it down.

If no physical or graphical button is pressed on the measuring tool for approx. 5 minutes, the measuring tool will switch off automatically to save the batteries/rechargeable batteries.

All stored values are retained when the tool is switched off.

Measuring Procedure



Once switched on, the measuring tool is in the length measurement function. Other measuring functions can be set by pressing the **k** button (see "Measuring Functions", page 34). Once the measuring tool has been switched on, the rear edge of the measuring tool is selected as the reference level for measurement. Press the **e** button to change the reference level (see "Selecting the Reference Level", page 34).

Place the measuring tool with the selected reference plane against the desired starting point of the measurement (e.g. a wall).

To switch on the laser beam, briefly press the measuring button **1**.

► **Do not point the laser beam at persons or animals and do not look into the laser beam yourself, not even from a large distance.**

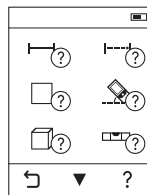
Aim the laser beam at the target surface. To initiate the measurement, briefly press the measuring button **1** again.

In the function continuous measurement, the measurement begins the first time you press the measuring button **1**.

The measured value typically appears within 0.5 seconds and no later than 4 seconds. The duration of the measurement depends on the distance, the lighting conditions and the reflective properties of the target surface.

If no measurement has taken place approx. 20 seconds after sighting, the laser beam is switched off automatically to save the batteries and the display is dimmed.

Integrated Help Function



Help in the form of an animation is stored in the measuring tool for each measuring function. First select the **k** button and then the required measuring function. The animation shows you the detailed procedure for the selected measuring function. The animation can be stopped and started again at any time. You can scroll forward and back.

34 | English

Selecting the Reference Level (see figures A – C)

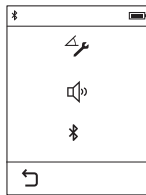
For the measurement, you can select between three different reference planes:

- the rear measuring-tool edge (e.g. when measuring onward from a wall),
- The positioning plate **3** folded out by 180° (e.g. when measuring from a corner),
- The front edge of the measuring tool (e.g. when measuring from a table edge).

To select the reference level, press the **e** button and select the required reference level on the touchscreen. The rear edge of the measuring tool is preset as the reference level every time the measuring tool is switched on.

Subsequent changing of the reference level for measurements that have already been carried out (e.g. when indicating measuring values in the measured-value list) is not possible.

“Basic Settings”



To go to the “Basic Settings” menu, press the **i** button and then the **o** button.

Now select the required button to deactivate or to activate the function. A deactivated setting is shown as a grey symbol, while an activated setting is shown as a white symbol.

To exit the “Basic Settings” menu, press the **n** button.

Basic Settings

Inclination Calibration		Start	
Tone Signals		On	Off
Bluetooth®		On	Off

Measuring Functions

Simple Length Measurement


Use simple length measurement to measure distances, lengths, heights and clearances, etc.

Press the **k** button and then select the button for length measurement **l**.

Briefly press the measuring button **1** once to switch on the laser and once to measure.


Area Measurement

Use area measurement to measure the length and width one after the other as with a length measurement. The laser beam remains switched on between the two measurements. After the second measurement has been completed, the area will be automatically calculated and displayed.

Press the **k** button and then select the button for area measurement .

Volume Measurement

Use volume measurement to measure the length, width and height one after the other as with a length measurement. The laser beam remains switched on between the three measurements. After the third measurement has been completed, the volume will be automatically calculated and displayed.

Press the **k** button and then select the button for volume measurement .

Addition/Subtraction of Lengths, Areas, Volumes

Use addition/subtraction of lengths, areas or volumes to measure lengths, areas or volumes and to automatically add or subtract them (e. g. helpful when calculating materials).

Press the **k** button and then select the button for length calculation  or area calculation  or volume calculation .

Use the \pm button to switch between “+” and “-” or to start a new calculation. To complete the addition/subtraction, press the measuring button **1**.

Values above 9999999 m³ or below -999999 m³ cannot be shown; “**ERROR**” appears on the display.

Indirect Distance Measurement

Note: Indirect distance measurement is always less accurate than direct distance measurement. For application-related reasons, measuring errors can be greater than with direct distance measurement. To improve measuring accuracy, we recommend placing the measuring tool against or on a firm surface.

The indirect distance measurement is used to measure distances that cannot be measured directly because an obstacle would obstruct the laser beam or no target surface is available as a reflector. This measuring procedure can only be used in vertical direction. Any deviation in horizontal direction leads to measuring errors.

For indirect length measurements, three measuring modes are available. Each measuring mode can be used for determining different distances.


36 | English

a) Indirect height measurement

Press the **k** button and select the button for indirect height measurement .

Pay attention that the measuring tool is positioned at the same height as the bottom measuring point.

b) Double indirect height measurement

Press the **k** button and select the button for double indirect height measurement .


Pay attention that the reference plane of the measurement (e.g. the rear edge of the measuring tool) remains exactly at the same location for all individual measurements within a measuring sequence.

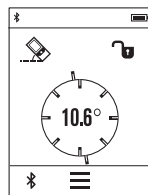
c) Indirect length measurement

Press the **k** button and select the button for indirect length measurement .


Pay attention that the measuring tool is positioned at the same height as the sought measuring point.

Inclination Measurement


Press the **k** button and select the button for grade measurement .

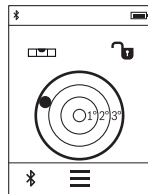


Inclination measurement is used to measure a slope or incline (e.g. of stairs, railings, when fitting furniture, laying pipes, etc.). The left-hand side of the measuring tool serves as the reference level for grade measurement. If no incline angle is shown on the display, the measuring tool was tipped sideways too severely during measurement.

You can hold the current measured value by pressing the measuring button **1** or the  button on the display.


Digital Spirit Level

Press the **k** button and select the button for the digital spirit level .



The digital spirit level is used to check the horizontal alignment of an object simultaneously on two axes (e.g. washing machine, refrigerator, etc.).

The rear of the measuring tool serves as the reference level for the digital spirit level.

You can hold the current measured value by pressing the measuring button **1** or the  button on the display.

Continuous Measurement (Tracking) / Minimum/Maximum Measurement (see figure D)

For continuous measurements, the measuring tool can be moved relative to the target, whereby the measuring value is updated approx. every 0.5 seconds. In this manner, as an example, you can move a certain distance away from a wall, while the actual distance can always be read.

Press the **k** button and select the button for continuous measurement $\text{---} \rightarrow$. Press the measuring button **1** to start the continuous measurement.

The minimum measurement is used to determine the shortest distance from a fixed reference point. It is used, as an example, for determining plumb lines or horizontal partitions.

The maximum measurement is used to determine the greatest distance from a fixed reference point. It is used, as an example, for determining diagonals.

Continuous measurement automatically switches off after 4 mins. The last measured value remains on the display.

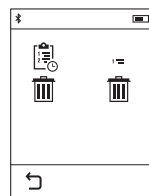
List of the Last Measured Values/Calculations

The measuring tool stores the last 10 measured values and their calculations and displays them in reverse order (most recent measured value/most recent calculation first).

Press the **i** button and select the **p** button.

Deleting Measured Values in the Measured-Value List

Press the **i** button and select the **p** button.



After selecting the **h** button, you can delete either the entire measured-value list or individual measured values. Press the button **h** to delete the selected individual measured value.

Data Transmission to other Devices

The measuring tool is equipped with a *Bluetooth*[®] module, which enables data transmission via radio technology to certain mobile terminals/devices with a *Bluetooth*[®] interface (e.g., smartphones, tablets).

38 | English

For information on the necessary system requirements for a *Bluetooth*® connection, please refer to the Bosch website at www.bosch-pt.de.

For data transmission via *Bluetooth*®, time delays between mobile terminal/device and measuring tool may occur. This can be possible due to the distance between both devices or the object being measured.

Activating the *Bluetooth*® Interface for Data Transmission to a Mobile Terminal/Device

To activate the *Bluetooth*® interface, press the *Bluetooth*® **j** button on the measuring tool. Alternatively, the *Bluetooth*® interface can be activated via the “Basic Settings” menu (see page 34).

Ensure that the *Bluetooth*® interface is activated on your mobile terminal/device.

The special Bosch app “PLR measure&go” is available to extend the range of functions of the mobile terminal/device and to make data easier to process. It can be downloaded in the respective stores, depending on the device:



The connection between mobile terminal/device and measuring tool is established after the Bosch application has started. If multiple active measuring tools are found, select the appropriate measuring tool.

The connection status and the active connection are displayed in the status bar of the measuring tool **(a)**.

If no connection can be established within 3 minutes of pressing the *Bluetooth*® **j** button, *Bluetooth*® will automatically switch off to save the batteries/rechargeable batteries.

Deactivating the Bluetooth® Interface

To deactivate the *Bluetooth*® interface, press the *Bluetooth*® j button or switch the measuring tool off. Alternatively, the *Bluetooth*® interface can be deactivated via the “Basic Settings” menu (see page 34).

Working Advice

- **The measuring tool is equipped with a radio interface. Local operating restrictions, e.g. in airplanes or hospitals, are to be observed.**

General Information

The reception lens **9** and the laser beam outlet **8** must not be covered when taking a measurement.

The measuring tool must not be moved while taking a measurement (with the exception of the continuous measurement and grade measurement functions). Therefore, place the measuring tool, as far as this is possible, against or on a firm stop or supporting surface.

Influence Effects on the Measuring Range

The measuring range depends upon the light conditions and the reflection properties of the target surface. For improved visibility of the laser beam when working outdoors and when the sunlight is intense, use the laser viewing glasses **10** (accessory) and the laser target plate **11** (accessory), or shade off the target surface.

Influence Effects on the Measuring Result

Due to physical effects, faulty measurements cannot be excluded when measuring on different surfaces. Included here are:

- Transparent surfaces (e.g., glass, water),
- Reflecting surfaces (e.g., polished metal, glass),
- Porous surfaces (e.g. insulation materials),
- Structured surfaces (e.g., roughcast, natural stone).

If required, use the laser target plate **11** (accessory) on these surfaces.

Furthermore, faulty measurements are also possible when sighting inclined target surfaces.

Also, air layers with varying temperatures or indirectly received reflections can affect the measured value.

40 | English**Accuracy Check and Calibration of the Grade Measurement**

The tilt sensor is used in the "Inclination Measurement", "Digital Spirit Level" and "Indirect Distance Measurement" modes. When you are using these modes, we recommend regular calibration (see "Basic Settings", page 34). Follow the instructions on the touchscreen.

We recommend that you perform an accuracy check and if necessary a calibration of the measuring tool after extreme temperature variations and after impact to the tool. After a temperature variation, the measuring tool must acclimatise for a while before grade calibration is performed.

The measuring tool will automatically suggest a calibration after severe variations in temperature.

Accuracy Check of the Distance Measurement

The accuracy of the distance measurement can be checked as follows:

- Select a permanently unchangeable measuring section which is approx. 3 to 10 m long and which you know the exact length of (e.g. room width, door opening). The measuring section must be indoors, and the target surface of the measurement must be smooth and reflect well.
- Measure the distance 10 times after another.

The deviation of the individual measurements from the mean value must not exceed ± 2 mm (max.). Log the measurements, so that you can compare their accuracy at a later point of time.

Measuring with Positioning Plate (see figure B)

Using the positioning plate **3** is suitable for applications such as measuring from a corner (room diagonal) or from hard-to-reach areas.

Fold out the positioning plate **3**.

Set the reference level to measurement with positioning plate in the measuring tool.

When the measurement has been completed, fold the positioning plate **3** back in.

Troubleshooting – Causes and Corrective Measures**Cause****Corrective Measure****Temperature warning indicator (b) flashing; measurement not possible**

The measuring tool is outside the operating temperature range from -10 °C to $+50$ °C (in the continuous measurement function up to $+40$ °C).	Wait until the measuring tool has reached the operating temperature
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Cause	Corrective Measure
Battery indicator decreasing	
Battery voltage decreasing (measurement still possible).	Replace batteries/rechargeable batteries
Battery indicator empty, measurement not possible	
Battery voltage too low	Replace batteries/rechargeable batteries
“ERROR” indication in the display	
The angle between the laser beam and the target is too acute.	Enlarge the angle between the laser beam and the target
The target surface reflects too intensely (e.g. a mirror) or insufficiently (e.g. black fabric), or the ambient light is too bright.	Work with the laser target plate 11 (accessory)
The laser beam outlet 8 or the reception lens 9 are misted up (e.g. due to a rapid temperature change).	Wipe the laser beam outlet 8 and/or the reception lens 9 dry using a soft cloth
Calculated value is larger than 9 999 999 or smaller than - 999 999 m/m ² /m ³ .	Divide calculation into intermediate steps
The calibration of the grade measurement was not carried out in the correct sequence or in the correct positions.	Repeat the calibration according to the instructions on the display and in the operating instructions.
The surfaces used for calibration were not precisely horizontal.	Repeat the calibration on a horizontal surface and check the surface beforehand if necessary using a spirit level.
The measuring tool was moved or tilted while pressing the button.	Repeat the calibration and hold the measuring tool in place while pressing the button.

42 | English

Cause

Corrective Measure

No Bluetooth® connection

“ERROR” indication in the display

Failure of the *Bluetooth*® connection

Switch *Bluetooth*® off and back on again.

Check the application on your mobile terminal/device.

Check if *Bluetooth*® is activated on your measuring tool and mobile terminal/device.

Check your mobile terminal/device for overload.

Reduce the distance between measuring tool and your mobile terminal/device.

Avoid obstructions (e. g., reinforced concrete, metal doors) between measuring tool and your mobile terminal/device. Observe clearance to electromagnetic disturbances (e. g., WLAN transmitters).

Bluetooth® cannot be activated

Battery voltage too low

Replace batteries/rechargeable batteries

Measuring result not plausible

The target surface does not reflect correctly (e. g. water, glass).

Cover off the target surface

The laser beam outlet **8** or the reception lens **9** are covered.

Make sure that the laser beam outlet **8** or the reception lens **9** are unobstructed

Wrong reference level set

Select reference level that corresponds to measurement

Obstruction in path of laser beam

Laser point must be completely on target surface.

Cause	Corrective Measure
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The display remains unchanged or the measuring tool reacts unexpectedly when the measuring button or the buttons are pressed

Software error	Remove the batteries/rechargeable batteries, reinsert them and restart the measuring tool.
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The measuring tool monitors the correct operation in each measurement. If a defect is detected, the display will show only the adjacent symbol. In this case, or when the above mentioned corrective measures cannot correct an error, have the measuring tool checked by an after-sales service agent for Bosch power tools.

Maintenance and Service

Maintenance and Cleaning

Store and transport the measuring tool only in the supplied protective pouch.

Keep the measuring tool clean at all times.

Do not immerse the measuring tool in water or other fluids.

Wipe off debris using a moist and soft cloth. Do not use any cleaning agents or solvents.

Maintain the reception lens **9** in particular, with the same care as required for eye glasses or the lens of a camera.

In case of repairs, send in the measuring tool packed in its protective pouch **12**.

After-sales Service and Application Service

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts. Exploded views and information on spare parts can also be found under:

www.bosch-pt.com

Bosch's application service team will gladly answer questions concerning our products and their accessories.

In all correspondence and spare parts orders, please always include the 10-digit article number given on the nameplate of the product.



44 | English

Great Britain

Robert Bosch Ltd. (B.S.C.)
P.O. Box 98
Broadwater Park
North Orbital Road
Denham
Uxbridge
UB 9 5HJ

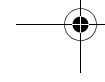
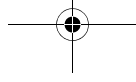
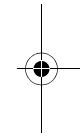
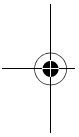
At www.bosch-pt.co.uk you can order spare parts or arrange the collection of a product in need of servicing or repair.
Tel. Service: (0344) 7360109
E-Mail: boschservicecentre@bosch.com

Ireland

Origo Ltd.
Unit 23 Magna Drive
Magna Business Park
City West
Dublin 24
Tel. Service: (01) 4666700
Fax: (01) 4666888

Australia, New Zealand and Pacific Islands

Robert Bosch Australia Pty. Ltd.
Power Tools
Locked Bag 66
Clayton South VIC 3169
Customer Contact Center
Inside Australia:
Phone: (01300) 307044
Fax: (01300) 307045
Inside New Zealand:
Phone: (0800) 543353
Fax: (0800) 428570
Outside AU and NZ:
Phone: +61 3 95415555
www.bosch.com.au
Supplier code ERAC000385





Republic of South Africa

Customer service

Hotline: (011) 6519600

Gauteng – BSC Service Centre

35 Roper Street, New Centre
Johannesburg

Tel.: (011) 4939375

Fax: (011) 4930126

E-Mail: bsctools@icon.co.za

KZN – BSC Service Centre

Unit E, Almar Centre
143 Crompton Street
Pinetown

Tel.: (031) 7012120

Fax: (031) 7012446

E-Mail: bsc.dur@za.bosch.com

Western Cape – BSC Service Centre

Democracy Way, Prosperity Park
Milnerton

Tel.: (021) 5512577

Fax: (021) 5513223

E-Mail: bsc@zsd.co.za

Bosch Headquarters

Midrand, Gauteng

Tel.: (011) 6519600

Fax: (011) 6519880

E-Mail: rbsa-hq.pts@za.bosch.com

Disposal

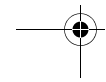
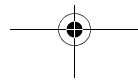
Measuring tools, accessories and packaging should be sorted for environmental-friendly recycling.

Do not dispose of measuring tools into household waste!

Only for EC countries:



According to the European Guideline 2012/19/EU, measuring tools that are no longer usable, and according to the European Guideline 2006/66/EC, defective or used battery packs/batteries, must be collected separately and disposed of in an environmentally correct manner.



46 | Français

Batteries no longer suitable for use can be directly returned at:

Great Britain

Robert Bosch Ltd. (B.S.C.)
P.O. Box 98
Broadwater Park
North Orbital Road
Denham
Uxbridge
UB 9 5HJ

At www.bosch-pt.co.uk you can order spare parts or arrange the collection of a product in need of servicing or repair.
Tel. Service: (0344) 7360109
E-Mail: boschservicecentre@bosch.com

Subject to change without notice.

Français

Avertissements de sécurité



Pour une utilisation sans danger et en toute sécurité de l'appareil de mesure, lisez attentivement toutes les instructions et tenez-en compte. Si l'appareil de mesure n'est pas utilisé conformément aux présentes instructions, les dispositifs de protection intégrés dans l'appareil sont susceptibles d'être endommagés. Faites en sorte que les étiquettes d'avertissement se trouvant sur l'appareil de mesure restent toujours lisibles. **CONSERVEZ CES INSTRUCTIONS DANS UN LIEU SÛR ET REMETTEZ-LES À TOUT NOUVEL UTILISATEUR DE L'APPAREIL DE MESURE.**

► **Attention** – si d'autres dispositifs d'utilisation ou d'ajustage que ceux indiqués ici sont utilisés ou si d'autres procédés sont appliqués, ceci peut entraîner une exposition dangereuse au rayonnement.