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Entsorgung

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

Werfen Sie Messwerkzeuge und Akkus/Batterien 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 Wiederverwertung 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.

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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 IN-**

STRUCTIONS IN A SAFE PLACE AND INCLUDE THEM WITH THE MEASURING TOOL WHEN GIVING IT TO A THIRD PARTY.

► **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 14 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.

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 and clearances, and for calculating areas and volumes.

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


Product Features


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

- 1 Plus button [+]
- 2 Function button
- 3 *Bluetooth®* button
- 4 Measuring button [▲]
- 5 Colour display
- 6 Button for selection of the reference level
- 7 Minus button [-]
- 8 On/Off button [⏻]
- 9 Battery lid
- 10 Latch of battery lid
- 11 Serial number
- 12 Reception lens
- 13 Laser beam outlet
- 14 Laser warning label
- 15 Laser viewing glasses*
- 16 Laser target plate*
- 17 Protective pouch





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

Display Elements**a** Status *Bluetooth*[®]

 *Bluetooth*[®] activated, no connection established

 *Bluetooth*[®] activated, connection established

b Battery indicator**c** Reading**d** Result**e** Laser switched on**f** Measurement reference level**g** Measuring functions

-  Length measurement
-  Continuous measurement
-  Surface measurement
-  Volume measurement

h Error message “**Error**”**Technical Data**

Digital Laser Measure	PLR 30 C	PLR 40 C
Article number	3 603 F72 1..	3 603 F72 3..
Measuring range	0.05 – 30 m ^{A)}	0.05 – 40 m ^{A)}
Measuring accuracy (typical)	± 2.0 mm ^{B)}	± 2.0 mm ^{B)}
Lowest indication unit	1 mm	1 mm
Operating temperature	-10 °C... +40 °C	-10 °C... +40 °C
Storage temperature	-20 °C... +70 °C	-20 °C... +70 °C
Relative air humidity, max.	90 %	90 %
Laser class	2	2
Laser type	635 nm, < 1 mW	635 nm, < 1 mW
Laser beam diameter (at 25 °C) approx.		
- at 10 m distance	9 mm	9 mm
- at 30 m distance	27 mm	27 mm
- at 40 m distance	-	36 mm

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Digital Laser Measure	PLR 30 C	PLR 40 C
Automatic switch-off after approx.		
– Laser	20 s	20 s
– Measuring tool (without measurement)	5 min	5 min
– <i>Bluetooth</i> [®] (if inactive)	3 min	3 min
Weight according to EPTA-Procedure 01:2014	0.084 kg	0.084 kg
Dimensions	100 x 42 x 22 mm	100 x 42 x 22 mm
Batteries	2 x 1,5 V LR03 (AAA)	2 x 1,5 V LR03 (AAA)
Battery life, approximately		
– Individual measurements	10000 ^{C)E)}	10000 ^{C)E)}
– Continuous measurement	2.5 h ^{C)E)}	2.5 h ^{C)E)}
Data transmission		
<i>Bluetooth</i> [®]	<i>Bluetooth</i> [®] 4.0 (Classic and Low Energy) ^{D)}	<i>Bluetooth</i> [®] 4.0 (Classic and Low Energy) ^{D)}

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) At 25 °C operating temperature

D) 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.

E) *Bluetooth*[®] deactivated


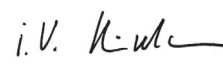
The measuring tool can be clearly identified with the serial number **11** on the type plate.

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:
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Leinfelden, 25.08.2015


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 **9**, press the latch **10** 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.

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- ▶ **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

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 of the Measuring Tool", page 35) each time before continuing to work.

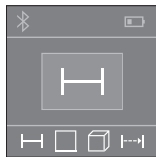
Switching On and Off

To **switch on** the measuring tool, briefly press the On/Off button **1** or the measuring button **4**. When switching on the measuring tool, the laser beam is not switched on.

To **switch off** the measuring tool, press the On/Off button **1** for a few seconds.

If none of the measuring tool buttons are pressed for approx. 5 minutes, the measuring tool switches off automatically in order to extend the service life of the battery.

Measuring Procedure



Once switched on, the measuring tool is in the length measurement function. You can set other measuring functions by repeatedly pressing the button **2** (see "Measuring Functions", page 29).

After confirming the measurement function with the measuring button **4**, the laser beam is switched on.

After switching on, the rear edge of the measuring tool is preset as the reference level for the measurement. To change the reference level, see "Selecting the Reference Level", page 29.

With the reference level selected, place the measuring tool against the desired measuring line (e.g. a wall).

To initiate the measurement, briefly press the measuring button **4**. Then the laser beam is switched off. To switch the laser beam on again, briefly press the measuring button **4**. To initiate a further measurement, briefly press the measuring button **4**.

► **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.**

In the function continuous measurement, the measurement begins the first time you press the measuring button **4**.

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.

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

Selecting the Reference Level (see figures A – B)


Two different reference levels are available for measuring:

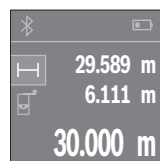
- The rear edge of the measuring tool (e.g. when placing against a wall),
- The front measuring-tool edge (e.g. when measuring onward from a table edge).

To change the reference level, press button **6** until the requested reference level is indicated on the display. Each time after switching on the measuring tool, the rear end of the measuring tool is preset as the reference level.

Measuring Functions

Length Measurement

For length measurements, repeatedly press the button **2** or press and hold the measuring button **4** until the indicator for length measurement  appears on the display **5**.



Press the measuring button **4** once to aim at the target surface and again to measure.

The measured value is indicated at the bottom in the display.

Repeat the above-mentioned steps for each subsequent measurement. The last 3 measured values are shown on the display. The last measured value is at the bottom of the display, the penultimate measured value is above it, and so on.