

# WEU

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## Zamo



# BOSCH

**Robert Bosch Power Tools GmbH**

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GERMANY

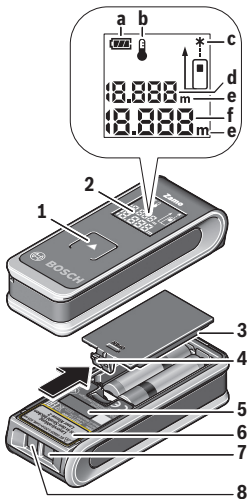
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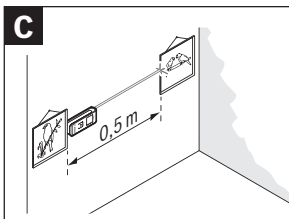
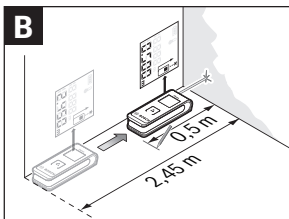
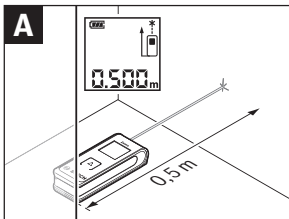
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# English

## 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.**

- ▶ **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 6 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 view-

ing 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.

# Product Description and Specifications

## Intended Use

The measuring tool is intended for measuring distances, lengths, heights, and clearances. The measuring tool is suitable for measuring indoors.

## Product Features

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

- 1** Measuring button
- 2** Display
- 3** Battery lid
- 4** Latch of battery lid
- 5** Serial number
- 6** Laser warning label
- 7** Reception lens
- 8** Laser beam outlet

## Display Elements

- a** Battery low indicator
- b** Temperature warning
- c** Laser switched on

**d** Previous measuring value

**e** Unit of measure

**f** Current measuring value

## Technical Data

Digital Laser Measure	Zamo
Article number	3 603 F72 6..
Measuring range (typical)	0.15 – 20.000 m
Measuring accuracy (typical)	± 3.0 mm
Lowest indication unit	1 mm
Measuring duration	
– typical	0.5 s
– maximal	4.15 s
Operating temperature	– 10 °C ... + 40 °C
Storage temperature	– 20 °C ... + 70 °C
Relative air humidity, max.	90 %
Laser class	2
Laser type	635 nm, < 1 mW



Digital Laser Measure	Zamo
Diameter of laser beam* (at 25 °C), approx.	
– at 10 m distance	9 mm
– at 20 m distance	18 mm
Batteries	2 x 1.5 V LR03 (AAA)
Battery service life in measuring operation, approx.	5 h
Weight according to EPTA-Procedure 01:2014	0.08 kg
Dimensions	101.4 x 38 x 22.3 mm

\* depending on surface characteristics and ambient conditions

The measuring tool can be clearly identified with the serial number **5** on the type plate.

## Notes

- **Note on measuring range:** The working range increases depending on how well the laser light is reflected from the surface of the target (scat-

tered, not reflective) and with increased brightness of the laser point to the ambient light intensity (interior spaces, twilight). In unfavourable conditions, e.g., with extreme interior illumination or a badly reflecting surface, the measuring range may be limited.

- **Note on measuring accuracy:** In unfavourable conditions, e.g. with extreme interior illumination, a badly reflecting surface, or room temperature deviating greatly from 25 °C, the maximum deviation can be  $\pm 5$  mm at 20.000 m. In unfavourable conditions, a deviation influence of  $\pm 0.05$  mm/m must be taken into account.


## Assembly

### Inserting/Replacing the Batteries

Alkali-manganese batteries are recommended for the measuring tool.

Insert the batteries (see illustration on page 3). When inserting, pay attention to the correct polarity according to the representation on the inside of the battery compartment.

The battery warning **a** is shown on the display when the battery voltage is becoming weak.


When the battery symbol  appears for the first time on the display, measurements are possible for approx. another 15 minutes. When the battery symbol flashes, you have to replace the batteries because measurements are no longer possible.

Replace all batteries at the same time. Only use same-brand batteries with the identical battery capacity.

## Operation

### Initial Operation

#### 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 switched on. Indicator  flashes on the display.

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

## Measuring Procedure

A continuous measurement is performed after the measuring tool has been switched on. The current measuring value **f** is shown in the bottom line of the display (see figure A). During continuous measurement the measuring tool can be moved relative to the target, and the current measuring value **f** will be updated approx. every 0.5 seconds in the bottom line of the display (see figure B). Indicator **\*** flashes on the display.

Press the measuring button **1** to stop the measuring process. The laser beam is switched off and the current measuring value **f** is displayed. Press the measuring button **1** again to switch the laser back on and continue measuring. The current measuring value **f** is shown in the bottom line of the display, while the previous measuring value **d** is shown above it.

The rear edge of the measuring tool is the reference level for the measurement (  ).

When no button on the measuring tool is pressed for approx. 5 minutes, the measuring tool automatically switches off to save the batteries.

- **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.**

## Working Advice

### General Information

The reception lens **7** and the laser beam outlet **8** must not be covered when taking a measurement.

Measurement takes place at the centre of the laser beam, even when target surfaces are sighted at an incline.

### Troubleshooting – Causes and Corrective Measures

Cause	Corrective Measure
<b>Temperature warning indicator (b) flashing; measurement not possible</b>	
Measuring tool not within the operating temperature range between $-10\text{ }^{\circ}\text{C}$ and $+40\text{ }^{\circ}\text{C}$ .	Wait until the measuring tool has reached the operating temperature

# Maintenance and Service

## Maintenance and Cleaning

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

For repairs, send in the measuring tool in.

## 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](http://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.

### **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](http://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](mailto:boschservicecentre@bosch.com)

### **Ireland**

Origo Ltd.

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[www.bosch.com.au](http://www.bosch.com.au)

## **Republic of South Africa**

### **Customer service**

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### **Western Cape – BSC Service Centre**

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### **Bosch Headquarters**

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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 and batteries/rechargeable batteries 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.

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](http://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](mailto:boschservicecentre@bosch.com)

**Subject to change without notice.**