

GLM 30 Professional



1609 92A OLG (2014.04) I/354 XXX

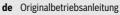
70745 Leinfelden-Echterdingen

Robert Bosch GmbH Power Tools Division

www.bosch-pt.com

Germany





Original instructions

Notice originale

Manual original

Manual original

Istruzioni originali

Oorspronkelijke gebruiksaanwijzing

Original brugsanvisning

Bruksanvisning i original

Original driftsinstruks

Alkuperäiset ohjeet

Πρωτότυπο οδηγιών χρήσης

Orijinal işletme talimatı

Instrukcja oryginalna

Původní návod k používání

Pôvodný návod na použitie

Eredeti használati utasítás

ru Оригинальное руководство по

эксплуатации

ик Оригінальна інструкція з експлуатації

kk Пайдалану нұсқаулығының тупнускасы

ro Instructiuni originale

bg Оригинална инструкция

Оригинално упатство за работа

Originalno uputstvo za rad

Izvirna navodila

Originalne upute za rad

Algupärane kasutusjuhend

Instrukcijas oriģinālvalodā

Originali instrukcija

正本使用说明书

原始使用說明書

사용 설명서 원본

تعليمات التشغيل الأصلية

دفتزچه راهنمای اصلی

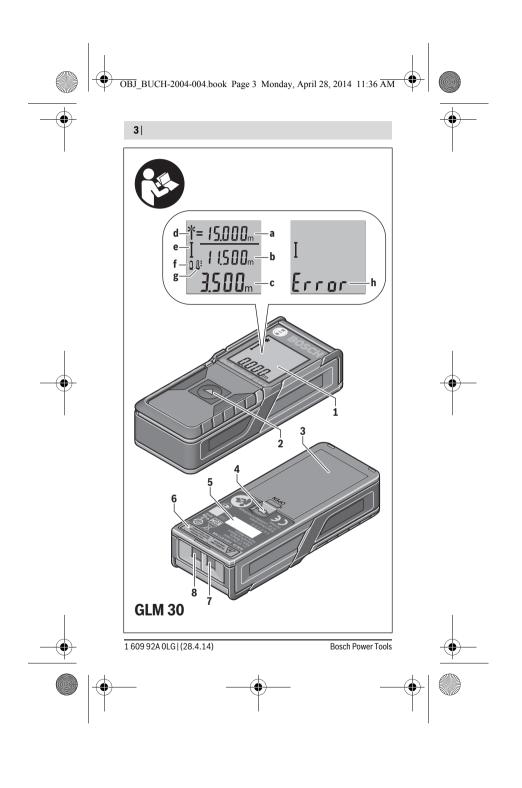


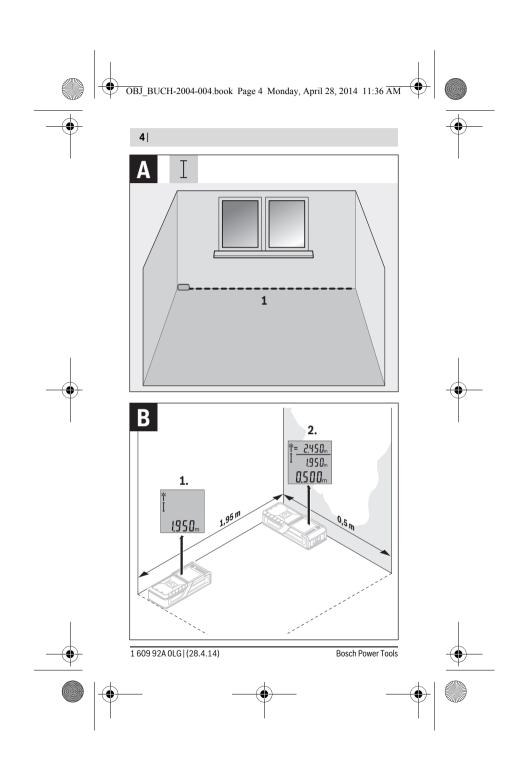


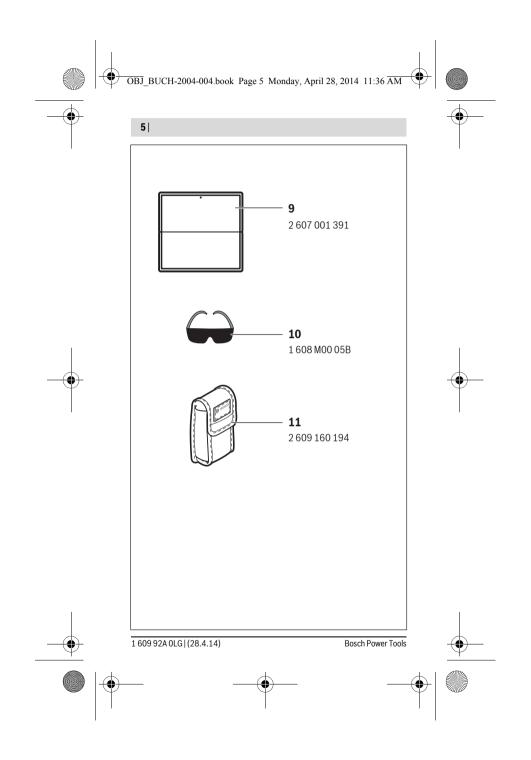




















English

Safety Notes

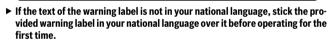


All instructions must be read and observed in order to work safely with the measuring tool. Never make warning signs on the measuring tool unrecognisable. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE AND INCLUDE THEM WITH THE MEASURING TOOL WHEN GIVING IT TO A THIRD PARTY.

- 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).



Laser Radiation
Do not stare into beam
Class 2 laser product





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 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.



Bosch Power Tools 1 609 92A 0LG | (28.4.14)























- ► 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.
- ▶ Do not make any modifications to the laser equipment.

Product Description and Specifications

Please unfold the fold-out page with the representation of the measuring tool and leave it unfolded while reading the operating instructions.

Intended Use

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

Technical Data

Digital Laser Measure		GLM 30
Article number	3 601 K72 5	3 601 K72 57.
Measuring range (typical)	0.15-30 m ^{A)}	0.15-30 m ^{A)}
Measuring range (typical under unfavourable conditions)	20 m ^{B)}	20 m ^{B)}
Measuring accuracy (typical)	± 2.0 mm ^{A)}	± 2.0 mm ^{A)}
Measuring accuracy (typical under unfavourable conditions)	± 3.0 mm ^{B)}	± 3.0 mm ^{B)}
Lowest indication unit	1 mm	1 mm
Operating temperature	-10 °C+45°C	-10 °C+45°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



1 609 92A 0LG | (28.4.14)

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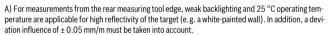








Digital Laser Measure		GLM 30
Laser beam diameter (at 25 °C) approx.		
at 10 m distanceat 30 m distance	9 mm ^{C)} 27 mm ^{C)}	9 mm ^{C)} 27 mm ^{C)}
Automatic switch-off after approx.		
– Laser	20 s	20 s
 Measuring tool (without measurement) 	5 min	5 min
Weight according to EPTA-Procedure 01/2003	0.1 kg	0.1 kg
Dimensions	105 x 41 x 24 mm	105 x 41 x 24 mm
Degree of protection	IP 54 (dust and splash proof) D)	IP 54 (dust and splash proof) D)
Batteries	2 x 1.5 V LR03 (AAA)	2 x 1.5 V LR03 (AAA)
Rechargeable batteries	2 x 1.2 V HR03 (AAA)	2 x 1.2 V HR03 (AAA)
Individual measurement per battery set	5000	5000
Setting the unit of measure		•
Setting the sound	•	_



- B) For measurements from the rear measuring tool edge, strong backlighting and 10 $^{\circ}$ C to +45 $^{\circ}$ C operating temperature are applicable for low reflectivity of the target (e.g. a black box). In addition, a deviation influence of \pm 0.15 mm/m must be taken into account.
- C) At 25 $^{\circ}\text{C}$ operating temperature
- D) except battery compartment

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











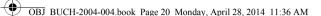


















Product Features

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

- 1 Display
- 2 Measuring button
- 3 Battery lid
- 4 Latch of battery lid
- 5 Serial number
- 6 Laser warning label
- 7 Reception lens
- 8 Laser beam outlet
- 9 Laser target plate*
- 10 Laser viewing glasses*
- 11 Protective pouch*
- * The accessories illustrated or described are not included as standard delivery.

Display Elements

- a Auto-sum
- **b** Previous measuring value
- c Current measuring value
- d Laser, switched on
- e Length measurement
- f Battery low indicator
- g Temperature warning
- h Error message "Error"

Assembly

Inserting/Replacing the Batteries

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

With 1.2-V-rechargeable batteries fewer measurements could be possible than with 1.5-V-batteries.

To open the battery lid 3, press the latch 4 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.

1 609 92A 0LG | (28.4.14)

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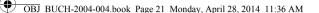




















When the battery symbol appears $rac{1}{2}$ for the first time on the display, at least 100 individual measurements are still possible.

When the battery symbol — flashes, the batteries/rechargeable batteries must be replaced. 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

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 Distance Measurement", page 24) each time before continuing to work.

Switching On and Off

To **switch on** the measuring tool, briefly press the measuring button **2**. Measuring tool and laser are switched on.

▶ 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.

To **switch off** the measuring tool, press the measuring button **2** and hold it down.

Measuring Procedure (see figure A)

Once switched on, the measuring tool is in the length measurement mode.

The rear edge of the measuring tool is always the reference level for the measurement. Place the measuring tool against the desired starting point of the measurement (e.g. a wall).



1 609 92A OLG | (28.4.14)





















Briefly press the measuring button **2** to initiate the measurement. Then the laser beam is switched off. To switch the laser beam on again, briefly press the measuring button **2**. To initiate a further measurement, briefly press the measuring button **2** again.

► 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.

Note: 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. Upon completion of the measurement the laser beam is automatically switched off.

Auto-Sum (see figure B)

The auto-sum automatically shows the sum of all individual measurements (e.g. useful for the material calculation).

The auto-sum value is erased as soon as the device is switched off or if it automatically switches off when no button is pressed after 5 minutes.

The auto-sum is not saved. A subsequent correction of the auto-sum is not possible. Aim the laser beam at the target surface.



Briefly press the measuring button **2** to initiate the measurement. The current measured value **c** appears in the bottom line of the display. The laser beam is switched off.



To switch on the laser beam, briefly press the measuring button $\bf 2$. To switch on the laser beam, briefly press the measuring button $\bf 2$ again. The current measured value $\bf c$ is displayed in the bottom line. The previous measured value $\bf b$ is displayed in the middle line. In the top line, the auto-sum $\bf a$ (the sum of the current and previous measured value) is displayed.

Switching the Sound On and Off (3 601 K72 5..)

Switch the measuring tool off.

Sound	Sound
On	OFF

Press and hold the measuring button **2**. When the cursor is on the desired setting, release the measuring button **2**. After releasing, the measuring tool switches itself on with the selected setting.











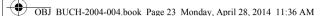
















Changing the Unit of Measure (3 601 K72 57.)

Switch the measuring tool off.



Press and hold the measuring button **2**. When the cursor is on the desired setting, release the measuring button **2**. After releasing, the measuring tool switches itself on with the selected setting.

Display Illumination

The display illumination is continuously switched on. When no button is pressed, the display illumination is dimmed after approx. 10 seconds to preserve the batteries/ rechargeable batteries. When no button is pressed for after approx. 30 seconds, the display illumination goes out.

Working Advice

General Information

The reception lens **7** 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. 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 on the lighting conditions and the reflective properties of the target surface. For better visibility of the laser beam in extraneous light, use the laser viewing glasses **10** (accessories) and the laser target plate **9** (accessories) or shade the target area.

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 9 (accessory) on these surfaces.

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



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1 609 92A 0LG | (28.4.14)





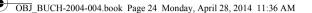


















Also, air layers with varying temperatures or indirectly received reflections can affect the measured value.

Accuracy Check of the Distance Measurement

The accuracy of the measuring tool can be checked as follows:

- Select a permanently unchangeable measuring section with a length of approx. 3 to 10 metres; its length must be precisely known (e.g. the width of a room or a door opening). The measurement should be carried out under favourable conditions, meaning, the measuring distance must be indoors and the target surface for the measurement must be smooth and reflect well.
- Measure the distance 10 times after another.

The deviation of the individual measurements from the average value must not exceed ± 4 mm over the entire measuring section in favourable conditions. Record the measurements in order to be able to compare the accuracy at a later date.

Troubleshooting - Causes and Corrective Measures

Cause	Corrective Measure
Temperature warning indicator (g) flash	ning; measurement not possible
The measuring tool is outside the operating temperature range of -10 °C to $+45$ °C.	Wait until the measuring tool has reached the operating temperature
"Error" indication in the display	
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 9 (accessory)
The laser beam outlet 8 or the reception lens 7 are misted up (e.g. due to a rapid temperature change).	Wipe the laser beam outlet 8 and/or the reception lens 7 dry using a soft cloth
The calculated auto-sum is greater than 99 999 m.	Divide calculation into intermediate steps
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 7 are covered.	Make sure that the laser beam outlet 8 or the reception lens 7 are unobstructed
Obstruction in path of laser beam	Laser point must be completely on target surface.
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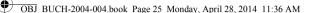


















uring tool again after reinserting them.

Cause	Corrective Measure
The indication remains unchanged or the measuring tool reacts unexpectedly after pressing a button	
Software error	Remove the batteries and start the meas-

The measuring tool monitors the proper function for each measurement. When a defect is detected, all indicators on the display flash. In this case, or when the corrective measures listed above cannot correct the error, have your dealer forward the meas-

Maintenance and Service

uring tool to an authorised Bosch after-sales 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.

If the measuring tool should fail despite the care taken in manufacturing and testing procedures, repair should be carried out by an authorised after-sales service centre for Bosch power tools. Do not open the measuring tool yourself.

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 type plate of the measuring tool.















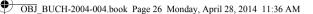


















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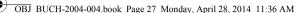


















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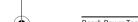
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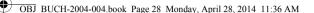


















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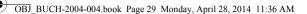


















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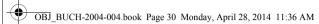






Bosch Power Tools











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Measuring tools, accessories and packaging should be sorted for environmentalfriendly 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.

















