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1 609 92A 21G

GIM Professional

60 | 120



BOSCH

de	Originalbetriebsanleitung	mk	Оригинално упатство за работа
en	Original instructions	sr	Originalno uputstvo za rad
fr	Notice originale	sl	Izvirna navodila
es	Manual original	hr	Originalne upute za rad
pt	Manual original	et	Algupärane kasutusjuhend
it	Istruzioni originali	lv	Instrukcijas oriģinālvalodā
nl	Oorspronkelijke gebruiksaanwijzing	lt	Originali instrukcija
da	Original brugsanvisning	ja	オリジナル取扱説明書
sv	Bruksanvisning i original	cn	正本使用说明书
no	Original driftsinstruks	tw	原始使用說明書
fi	Alkuperäiset ohjeet	ko	사용 설명서 원본
el	Πρωτότυπο οδηγιών χρήσης	th	หนังสือคู่มือการใช้งานฉบับต้นแบบ
tr	Orijinal işletme talimatı	id	Petunjuk-Petunjuk untuk Penggunaan Orisinal
pl	Instrukcja oryginalna	vi	Bản gốc hướng dẫn sử dụng
cs	Původní návod k používání	ar	تعليمات التشغيل الأصلية
sk	Pôvodný návod na použitie	fa	د فترتجه راهنمای اصلی
hu	Eredeti használati utasítás		
ru	Оригинальное руководство по эксплуатации		
uk	Оригінальна інструкція з експлуатації		
kk	Пайдалану нұсқаулығының түпнұсқасы		
ro	Instrucțiuni originale		
bg	Оригинална инструкция		

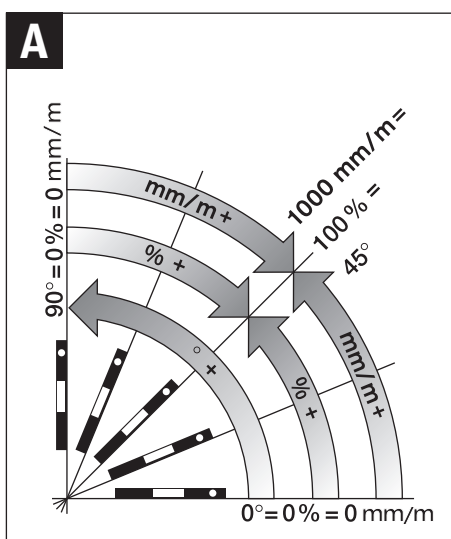
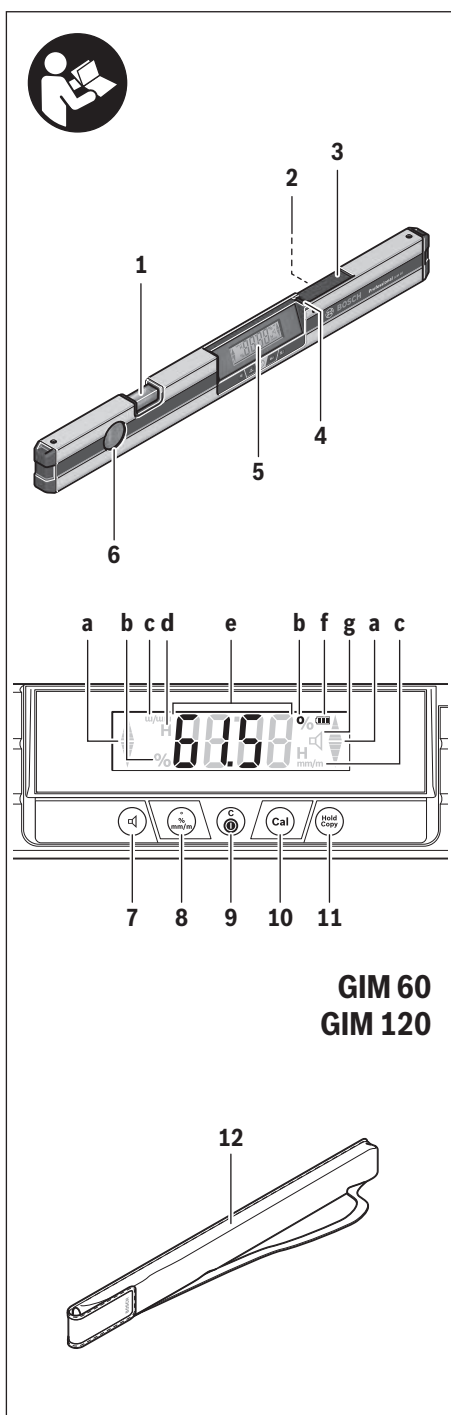


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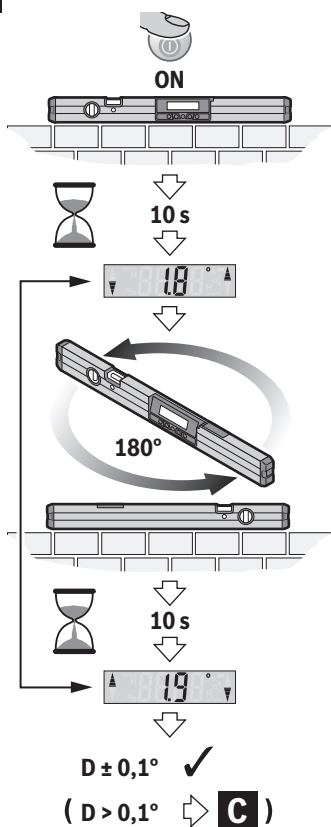
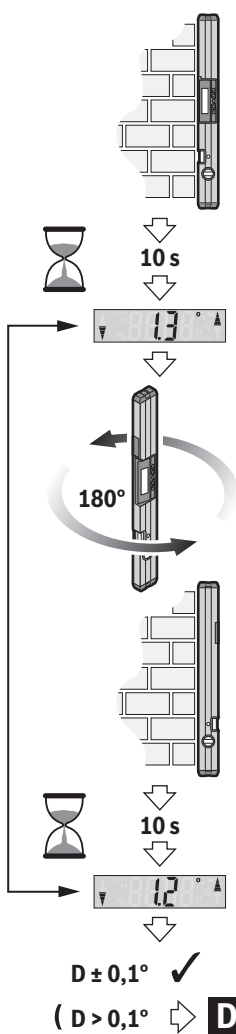
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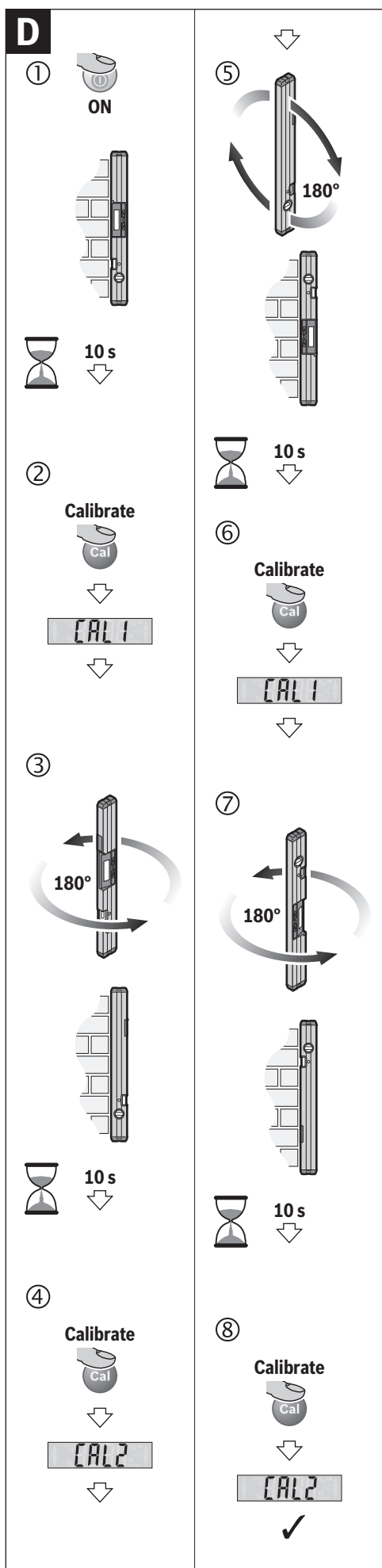


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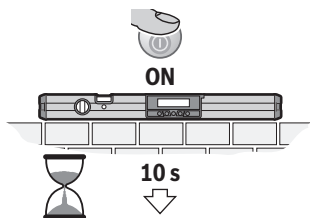
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B**D**



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⑦

⑧

English

Safety Notes



Read and observe all instructions. The integrated protections in the measuring tool may be compromised if the measuring tool is not used in accordance with the instructions provided. **SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

- **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 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



Working optimally with the measuring tool is possible only when the operating manual and working instructions are read completely, and the instructions contained therein are strictly followed. SAVE THESE INSTRUCTIONS.

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 quick and precise measuring of inclines.

Product Features

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

- 1 Spirit level for horizontal alignment
- 2 Serial number
- 3 Battery lid
- 4 Latch of battery lid
- 5 Illuminated display
- 6 Spirit level for vertical alignment
- 7 Audio signal button
- 8 Button for changing the unit of measure
- 9 **"ON/OFF"** button
- 10 Button for calibration **"Cal"**
- 11 **"Hold/Copy"** button
- 12 Protective pouch

Display Elements

- a Alignment aids
- b/c Units of measure: °; %; mm/m
- d **"H"** indicator for **"HOLD"** memory value
- e Reading
- f Battery indicator
- g Indicator for audio signal

Technical Data

Digital level	GIM 60	GIM 120
Article number	3 601 K76 700	3 601 K76 800
Dimensions		
– Length	608 mm	1 250 mm
– Width	27 mm	27 mm
– Height	59 mm	59 mm
Measuring range	0–360° (4 x 90°)	0–360° (4 x 90°)
Measuring accuracy		
– 0°/90°	± 0.05°	± 0.05°
– 1°–89°	± 0.2°	± 0.2°
Operating temperature	–10 °C ... +50 °C	–10 °C ... +50 °C
Storage temperature	–20 °C ... +70 °C	–20 °C ... +70 °C
Batteries	4x1.5 V LR6 (AA)	4x1.5 V LR6 (AA)
Rechargeable batteries ¹⁾	4x1.2 V HR6 (AA)	4x1.2 V HR6 (AA)

1) Due to the lower voltage of the rechargeable batteries, the battery indicator will not display a full charge.

The measuring tool can be clearly identified with the serial number **2** on the type plate.

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Digital level	GIM 60	GIM 120
Operating time, approx.	100 h	100 h
Weight according to EPTA-Procedure 01:2014	0.77 kg	1.4 kg
Automatic switch-off after approx.	30 min	30 min
IP 54 (dust and splash proof)	●	●

1) Due to the lower voltage of the rechargeable batteries, the battery indicator will not display a full charge.

The measuring tool can be clearly identified with the serial number **2** on the type plate.

Assembly






Inserting/Replacing the Batteries

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

To open the battery lid **3**, press on the latch **4** and fold the battery lid up. Insert the batteries. When inserting, pay attention to the correct polarity according to the representation on the inside of the battery lid.

Battery Indicator

The rechargeable battery/battery indicator **f** always displays the current battery status:

-  The battery is over 90 % charged
-  The battery is between 60 % and 90 % charged
-  The battery is between 30 % and 60 % charged
-  The battery is between 10 % and 30 % charged
-  The empty battery indicator flashes. The battery charge status is under 10 %. You can measure for approximately another 15 – 20 minutes from when the flashing begins until the tool shuts down.

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

- **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.
- **The contact surfaces and contact edges of the measuring tool must be clean. Protect the measuring tool against impact and shock.** Debris particles or deformations can lead to faulty measurements.
- **Avoid heavy impact to or dropping down of the measuring tool.** After severe exterior effects to the measuring tool, it is recommended to carry out an accuracy check (see “Checking the Measuring Accuracy”, page 14) each time before continuing to work.

Switching On and Off

Press the “ON/OFF” switch **9** to switch the measuring tool on or off.

If no button on the measuring tool is pressed for approx. 30 mins or the grade of the measuring tool is not changed by more than 1.5 °, then grade measurement and the display are automatically switched off to save the battery.

Changing the Unit of Measure (see figure A)

You can change between the units of measure “°”, “%” and “mm/m” at any time. For this, press the button for changing the unit of measure **8** as often as required until the desired setting is displayed in indicator **b/c**. The current measuring value is automatically converted.

The unit-of-measure setting is retained when switching the measuring tool on or off.

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Switching the Audio Signal On/Off

The audio signal can be switched on/off with the audio signal button **7**. When the audio signal is switched on, indicator **g** appears in the display.

When you switch on the measuring tool, the audio signal is switched on as standard.

Measured-value Indication and Alignment Aids

For each movement of the measuring tool, the measured value is updated. After moving the measuring tool to any extent, wait until the measured value no longer changes before reading the value.

Depending on the position of the measuring tool, the measured value and the unit of measure are indicated in the display rotated by 180°. Thus, the indication can also be read for overhead work.

The measuring tool uses alignment aids **a** on the display to show in which direction it has to be tilted in order to reach the target value. In standard measurements the target value is the horizontal or vertical, in the “**Hold/Copy**” function it is the stored measuring value.

When the target value is reached, the arrows of the alignment aids **a** go out and a continuous audio signal sounds when the audio signal is switched on.

Measuring Functions

Holding/Copying a Measured Value

Two functions can be controlled with the “**Hold/Copy**” button **11**:

- Holding (“Hold”) of a measured value, even when the measuring tool is moved afterwards (e. g., because the measuring tool is in a position in which the display cannot be read);
- Copying (“Copy”) of a measured value.

“**Hold**” function:

- **Briefly** press the “**Hold/Copy**” button **11**. The current measuring value **e** is held on the display and stored, and indicator “**H**” flashes.
- Press the “**Hold/Copy**” button **11** again to end the “**Hold**” function. The stored value is deleted. Normal measurement is continued.

“**Copy**” function:

- **Long** press the “**Hold/Copy**” button **11**. The current measuring value **e** is copied and indicator “**H**” is shown continuously on the display.
- **Briefly** press the “**Hold/Copy**” button **11**. The stored measuring value **e** is shown on the display and indicator “**H**” flashes.
- Place the measuring tool in the location to which the measuring value is to be transferred. When doing so, the alignment of the measuring tool is irrelevant. The alignment aids **a** show which direction the measuring tool has to be moved in to reach the grade you want to copy. When the stored grade is reached, an audio signal sounds and the alignment aids **a** go out.
- **Briefly** press the “**Hold/Copy**” button **11** again to return to normal measurement. Indicator “**H**” is shown continuously on the display.
- **Long** press the “**Hold/Copy**” button **11** to store a new value.
- To delete a “**Hold**” value, **briefly** press the “**ON/OFF**” button.

Checking the Measuring Accuracy (see figure B)

Check the accuracy of the measuring tool each time before using, after extreme temperature changes as well as after heavy jolts or impact.

Before measuring angles < 45°, the accuracy check should take place on a level and roughly horizontal surface; before measuring angles > 45°, on a level and roughly vertical surface. Switch the measuring tool on and place it on the horizontal or vertical surface.

Wait for 10 s and note down the measured value.

Rotate the measuring tool (as shown in the figure) by 180° around its vertical axis. Wait again for 10 s and note down the second measured value.

► **Calibrate the measuring tool only when the difference between both reading values is greater than 0.1°.**

Calibrate the measuring tool in the position (vertical or horizontal), in which the difference of the measured values has been determined.

Calibration for Horizontal Surfaces (see figure C)

The surface onto which you place the measuring tool must not deviate from the horizontal line **by more than 5°**. If the deviation is greater, the calibration process is discontinued with the indication “---”.

- ① Switch the measuring tool on and place it onto the horizontal surface in such a manner that the spirit level **1** faces upward and the display **5** faces you. Wait for 10 s.
- ② Then press the “**Cal**” calibration button **10** until “**CAL1**” appears briefly on the display. Then the measuring value will flash on the display.
- ③ Turn the measuring tool by 180° around the vertical axis so that the spirit level still faces upward, but the display **5** faces away from you. Wait for 10 s.
- ④ Then press the “**Cal**” calibration button **10** again. “**CAL2**” will be shown briefly on the display. Then the measuring value (no longer flashing) will appear on the display. The measuring tool has now been recalibrated for this supporting surface.
- ⑤ Afterwards you must calibrate the measuring tool for the opposite surface. For this, turn the measuring tool around its horizontal axis in such a manner that the spirit level **1** faces downward and the display **5** faces you. Place the measuring tool onto the horizontal surface. Wait for 10 s.
- ⑥ Then press the “**Cal**” calibration button **10** until “**CAL1**” appears briefly on the display. Then the measuring value will flash on the display.
- ⑦ Turn the measuring tool 180° around the vertical axis so that the spirit level still faces downward but the display **5** is facing away from you. Wait for 10 s.
- ⑧ Then press the “**Cal**” calibration button **10** again. “**CAL2**” will be shown briefly on the display. Then the measuring value (no longer flashing) will appear on the display. The measuring tool has now been recalibrated for both horizontal supporting surfaces.

Note: If the measuring tool is not turned around the axis shown in the figure in steps ③ and ⑦, **then the calibration cannot be completed** (“**CAL2**” is not indicated in the display).

Calibration for Vertical Surfaces (see figure D)

The surface onto which you place the measuring tool must not deviate from the vertical line **by more than 5°**. If the deviation is greater, the calibration process is discontinued with the indication “---”.

- ① Switch the measuring tool on and place it against the vertical surface in such a manner that the spirit level **6** faces upward and the display **5** faces you. Wait for 10 s.
- ② Then press the “**Cal**” calibration button **10** until “**CAL1**” appears briefly on the display. Then the measuring value will flash on the display.
- ③ Turn the measuring tool by 180° around the vertical axis so that the spirit level still faces upward, but the display **5** faces away from you. Wait for 10 s.
- ④ Then press the “**Cal**” calibration button **10** again. “**CAL2**” will be shown briefly on the display. Then the measuring value (no longer flashing) will appear on the display. The measuring tool has now been recalibrated for this supporting surface.
- ⑤ Afterwards you must calibrate the measuring tool for the opposite surface. For this, turn the measuring tool around its horizontal axis in such a manner that the spirit level **6** faces downward and the display **5** faces you. Place the measuring tool against the vertical surface. Wait for 10 s.
- ⑥ Then press the “**Cal**” calibration button **10** until “**CAL1**” appears briefly on the display. Then the measuring value will flash on the display.
- ⑦ Turn the measuring tool 180° around the vertical axis so that the spirit level still faces downward but the display **5** is facing away from you. Wait for 10 s.
- ⑧ Then press the “**Cal**” calibration button **10** again. “**CAL2**” will be shown briefly on the display. Then the measuring value (no longer flashing) will appear on the display. The measuring tool has now been recalibrated for both vertical supporting surfaces.

Note: If the measuring tool is not turned around the axis shown in the figure in steps ③ and ⑦, **then the calibration cannot be completed** (“**CAL2**” is not indicated in the display).

Maintenance and Service**Maintenance and Cleaning**

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

For safe and proper working, always keep the measuring tool clean.

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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.

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.

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