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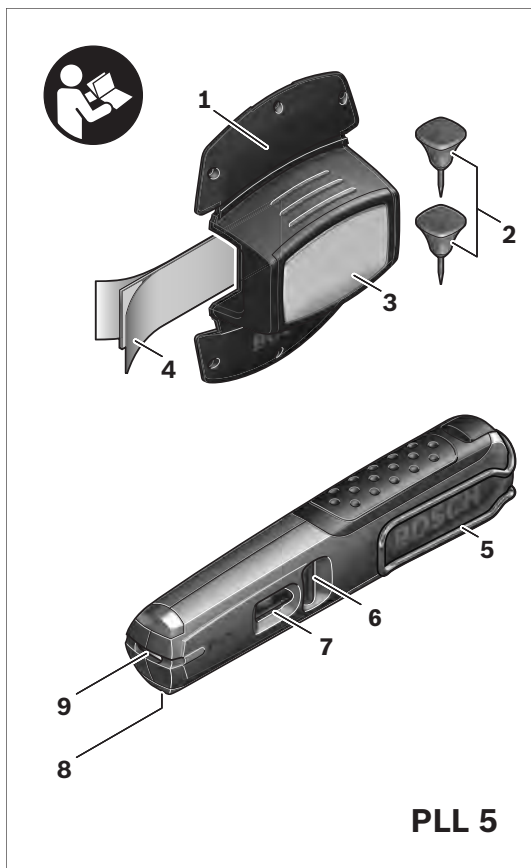
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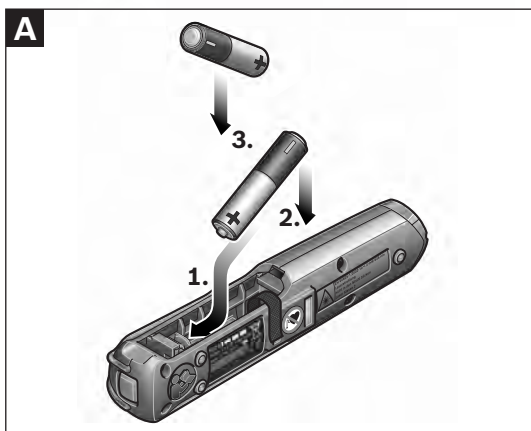
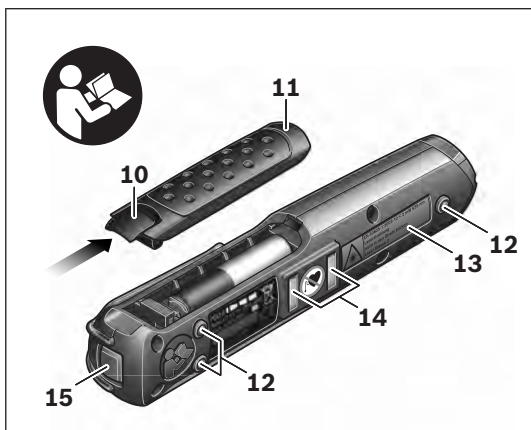
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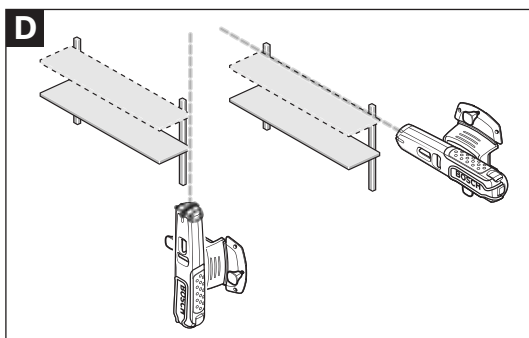
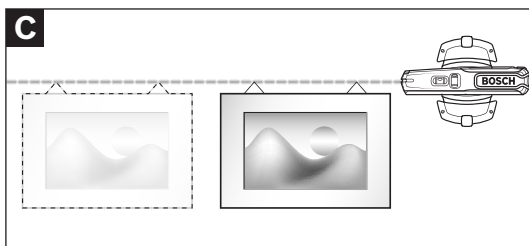
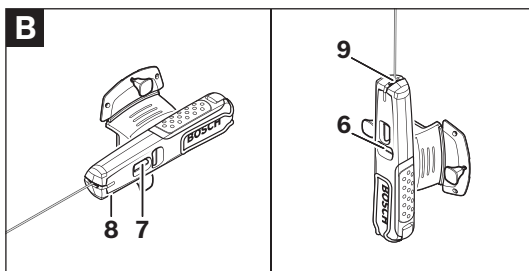
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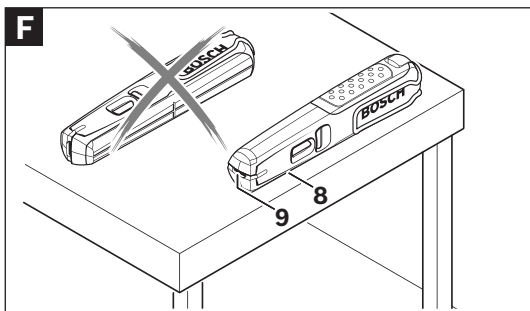
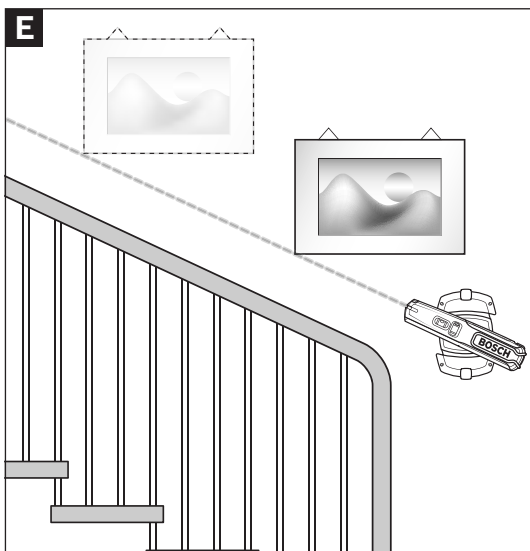


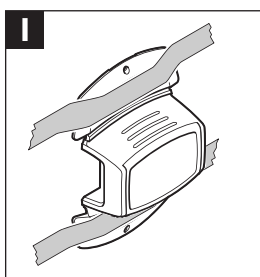
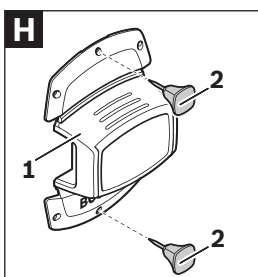
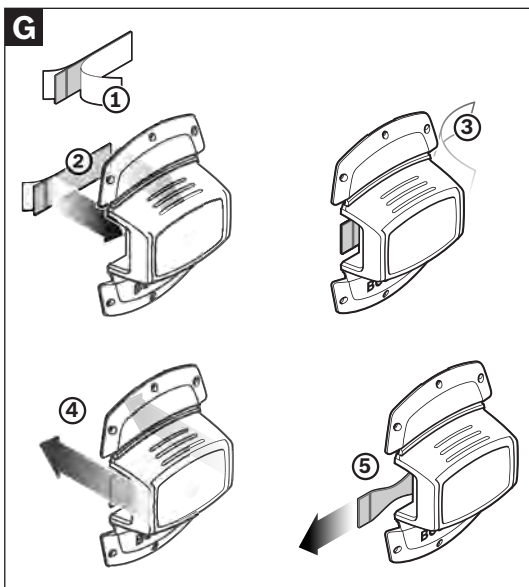
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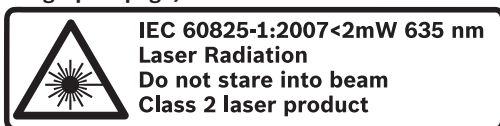


Safety Notes



Working safely with the measuring tool is possible only when the operating and safety information are read completely and the instructions contained therein are strictly followed. Never make warning labels on the measuring tool unrecognisable. SAVE THESE INSTRUCTIONS.

- ▶ **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 delivered with a warning label in German language (marked with the number 13 in the representation of the measuring tool on the graphic page).**



- ▶ **Before putting into operation for the first time, attach the supplied sticker in your national language over the German text on the warning label.**
- ▶ **Do not direct the laser beam at persons or animals and do not stare into the laser beam yourself.** This measuring tool produces laser class 2 laser radiation according to IEC 60825-1. This can lead to persons being blinded.

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- ▶ **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.



Keep the measuring tool away from cardiac pacemakers. The magnets **14** generate a field that can impair the function of cardiac pacemakers.

- ▶ **Keep the measuring tool away from magnetic data medium and magnetically-sensitive equipment.**
The effect of the magnets **14** can lead to irreversible data loss.

Functional Description

Intended Use

The measuring tool is intended for determining and indicating exact horizontal and vertical lines. It is also suitable for checking plumb lines and horizontal partitions or surfaces.

The measuring tool is suitable exclusively for operation in enclosed working sites.

Product Features

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

- 1 Wall holder
- 2 Pin
- 3 Metal plate of the wall holder
- 4 Adhesive tape strip*
- 5 Belt clip
- 6 Spirit level for vertical alignment
- 7 Spirit level for horizontal alignment
- 8 Aluminium supporting surface
- 9 Exit opening for laser beam
- 10 Latch of battery lid
- 11 Battery lid
- 12 Supporting points
- 13 Laser warning label
- 14 Magnets
- 15 On/Off switch

***Accessories shown or described are not part of the standard delivery scope of the product. A complete overview of accessories can be found in our accessories program.**

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Technical Data

Line laser	PLL 5
Article number	3 603 K15 000
Working range to approx.*	5 m
Levelling Accuracy**	±1 mm/m
Operating temperature	+5 °C...+40 °C
Storage temperature	-20 °C...+70 °C
Relative air humidity, max.	90 %
Laser class	2
Laser type	635 nm, <2 mW
C ₆	9.33
Batteries	2 x 1.5 V LR03 (AAA)
Weight according to EPTA-Procedure 01/2003	0.12 kg
Dimensions	142 x 27 x 30 mm

* when using the wall holder **1**; under unfavourable conditions such as intense sun irradiation, the working range is smaller

** when the measuring tool is positioned correctly (see "Positioning the Measuring Tool", page 27)

Please observe the article number on the type plate of your measuring tool. The trade names of the individual measuring tools may vary.

Assembly

Inserting/Replacing the Battery (see figure A)

Alkali-manganese batteries are recommended for the measuring tool.

To open the battery lid **11**, press the latch **10** in the direction of the arrow and remove the battery lid.

Place the battery-recovery ribbon under the first battery being inserted. Insert the supplied batteries in the sequence shown in the figure, paying attention to the correct polarity.

Always replace all batteries at the same time. Only use batteries from one brand and with the identical capacity.

- ▶ **Remove the batteries from the measuring tool when not using it for extended periods.** When storing for extended periods, the batteries can corrode and discharge themselves.

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 longer periods. In case of large variations in temperature, allow the measuring tool to adjust to the ambient temperature before putting it into operation.
- ▶ **Avoid heavy impact to or falling down of the measuring tool.** Damage to the measuring tool can impair its accuracy. After heavy impact or shock, compare the laser line with a known horizontal or vertical reference line.

Switching On and Off

To **switch on** the measuring tool, push the On/Off switch **15**. Immediately after switching on, the measuring tool sends a laser beam out of the exit opening **9**.

- ▶ **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.**

To **switch off** the measuring tool, push the On/Off switch **15** again.

- ▶ **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.



Measuring Functions

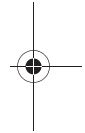
Note: The specified levelling accuracy applies for the alignment of the laser beam with reference to the spirit levels **6** and **7**.

Positioning the Measuring Tool (see figure B)

For precise alignment with the spirit levels, the position of the measuring tool is important.

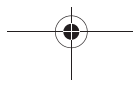
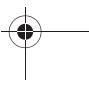
The specified levelling accuracy is only achieved when the measuring tool is correctly positioned:

- For horizontal alignment with the spirit level **7**, the aluminium supporting surface **8** of the measuring tool must face downward.
- For vertical alignment with the spirit level **6**, the exit opening for the laser beam **9** must face upward.



Aligning with the Laser Line

Horizontal Alignment (see figures C–D): Position the measuring tool with the three supporting points **12** against the wall or with help of the magnets **14**, fasten it to the wall holder **1** or to another magnetic surface. The aluminium supporting surface **8** of the measuring tool must face downward. Align the measuring tool horizontally with help of the spirit level **7**. Picture frames or tiles, as an example, can be aligned along the horizontal laser line.



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Vertical Alignment (see figure D): Position the measuring tool with the three supporting points **12** against the wall or with help of the magnets **14**, fasten it to the wall holder **1** or to another magnetic surface. The exit opening for the laser beam **9** must face upward. Align the measuring tool vertically with help of the spirit level **6**. Top and bottom cabinets, as an example, can be aligned alongside the vertical laser line.

Alignment off of Reference Points (see figure E): Position the measuring tool with the three supporting points **12** against the wall or with help of the magnets **14**, fasten it to the wall holder **1** or to another magnetic surface. Turn the measuring tool to any angle in order to align the laser beam to the reference points. In this manner, as an example, picture frames can be hung parallel to a stairway or ceiling pitch.

Checking Horizontal/Vertical Lines with the Spirit Levels (see figure F)

The measuring tool can be used as a contractors level for checking horizontal or vertical lines, e.g., for the level set-up of a washer or a refrigerator. Position the measuring tool with the aluminium supporting surface **8** facing against the surface to be checked. When positioning against horizontal surfaces, the aluminium supporting surface **8** must face downward. When positioning against vertical surfaces, the exit opening for the laser beam **9** must face upward.

Working Advice

- ▶ **Keep the adhesive tape strips 4 out of the reach of small children.** Children could mistake the strips with chewing gum.

Mounting to a Wall

Four fastening methods are available for fastening the wall holder to different surfaces:

- **Fastening with Adhesive Tape Strips**
(see figure G): With the removable adhesive tape strips **4**, the wall holder can be fastened to sensitive or delicate structural materials without causing damage to them. The structural surface must be straight, firm, dry, grease-free and have a temperature of at least 15 °C . Pull off one of the protective foils from an adhesive tape strip (①) and position the adhesive tape strip onto the back side of the wall holder (②) in such a manner that its end projects out. Pull off the second protective foil (③) and firmly press the wall holder with the adhesive tape strip against the structural surface (④) for at least five seconds. To remove the wall holder, pull out the adhesive tape strip by the projecting end slowly and as parallel as possible to the structural surface (⑤).
- **Fastening with Pins** (see figure H): With the pins **2** provided, the wall holder can be fastened to drywall or wooden walls. Insert the pins through the openings in the wall holder as shown in the figure.

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- **Fastening with a Screw:** Place the wall holder **1** via the opening on the back side onto a screw that projects lightly out of the wall.
- **Fastening with Adhesive Tape** (see figure I): The wall holder can also be fastened with commercially available adhesive tape (not included in the delivery scope) as shown in the figure.

For all four fastening methods, pay attention that the wall holder **1** is fastened securely to the structural surface. Faulty measurements can result when the wall holder slips away.

Attach the measuring tool via the magnets **14** onto the metal plate **3** of the wall holder **1**.

Belt Clip

With the belt clip **5**, the measuring tool, as an example, can be hooked to a belt and is always at hand.

Maintenance and Service

Maintenance and Cleaning

- **Check the measuring tool each time before use.** In case of visible damage or loose components inside the measuring tool, safe function can no longer be ensured.

Keep the measuring tool clean and dry at all times to ensure proper and safe working.

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

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.

In all correspondence and spare parts orders, please always include the 10-digit article number given on the type plate of the measuring tool.

After-sales Service and Customer Assistance

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

Our customer service representatives can answer your questions concerning possible applications and adjustment of products and accessories.

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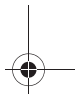
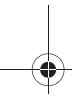
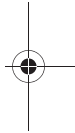
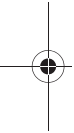


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Disposal

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

Only for EC countries:



Do not dispose of measuring tools into household waste!

According the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, measuring tools that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

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Do not dispose of battery packs/batteries into household waste, fire or water. Battery packs/batteries should, if possible, be discharged, collected, recycled or disposed of in an environmental-friendly manner.

Only for EC countries:

Defective or dead out battery packs/batteries must be recycled according to the guideline 2006/66/EC.

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

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P.O. Box 98
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Uxbridge
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Fax: +44 (0844) 736 0146
E-Mail: boschservicecentre@bosch.com

Subject to change without notice.