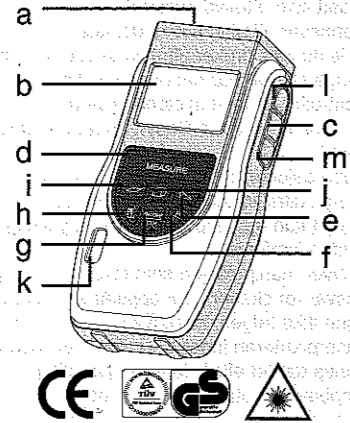# (GB) Laser measurement device ■kwb
Art.Nr. 0630-00

Important: Please read these operating instructions carefully prior to using the device and keep them for information purposes.

a) Laser beam outlet
b) LCD display
c) Recall
d) Measurement button
e) Pythagorean function
f) Metres / Feet switching button
g) On / Off / Clear
h) Measurement level
i) Area calculation
j) Volume calculation
k) Spirit level
l) + button
m) - button

CE ▲ ⓰ ⚠

Measurement bases
1) The laser measurement device measures distances using a laser beam
2) The device cannot measure through glass or colourless liquids, although the laser target point can be projected through.
3) Measurements can be carried out within a range of 0.30 – 50 m
4) Measurements may only be carried out within a temperature range of 0°C to 40°C

Measurement procedure
1. Switch the measurement device on by pressing the "On/Off" button (g).
2. Press the "Measure" button (d). The laser aiming point will be activated. Aim at your target and press the "Measure" button (d) again. The result will be shown in the display (b) in metres.
3. In order to display the result in millimetres, press the "Metres/Feet" button (f).
4. In order to display the result in inches, press the "Metres/Feet" button (f) again.
5. In order to display the result in feet, press the "Metres/Feet" button (f) again.
6. In order to display the result in metres again, press the "Metres/Feet" button (f) again.
7. In order to delete the current measurement value, press the "On/Off/Clear" (g) button.
8. The laser beam will switch off automatically after 30 seconds, if no entry is made.
9. The Laser measurement device will switch off automatically after 5 minutes, if no entry is made.
10. Measurements can be carried out both from the beginning of the housing and from the end of the housing. By pressing the 🔲 (h) button, the reference points can be switched.

### Selecting the measurement method
The laser measurement device offers you the possibility to added and subtract partial sections, as well as carrying out area and space calculations. A Pythagorean function is also integrated.

Basic measurement:
1. Prior to starting the measurement, press the "Measure" button (d). The laser beam will be activated.
2. Aim at your target and press the "Measure" button (d) again, in order to carry out the measurement. The result will be shown to you in the display (b)
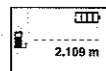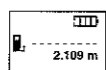

3. Repeat steps 1 and 2 in order to carry out the next measurement.
4. The result of the first measurement will be shown to you in the top row. The result of the second measurement will be shown to you in the bottom row.
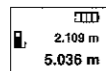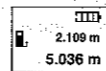

5. Repeat steps 1 and 2 in order to carry out additional measurements.
6. Press the "Recall" button (c), in order to display the previous measurements. With the "+" and "-" buttons (l + m), you can sequentially have the last 10 measurement results displayed.
7. By pressing the "Measure" button (d), you will exit the recall mode.

Multiple measurement:
1. Prior to starting the measurement, press the "Measure" button (d). The laser beam will be activated.
2. Aim at your target and press the "Measure" button (d) again, in order to carry out the measurement. The result will be shown to you in the display (b).


---

3. Press the "+" button (l) in order to add another measurement. Press the "-" button (m), in order to subtract an additional measurement.
4. Repeat steps 1 and 2 in order to carry out the next measurement.
5. The result of the second measurement will be displayed to you in the top row. The sum of the results will be displayed to you in the bottom row.
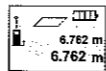

6. In order to add or subtract additional measurements, start again with step 3.
7. You can add and/or subtract any number of measurements.
8. Press the "Recall" button (c), in order to display the previous measurements. With the "+" and "-" buttons (l + m), you can have the last 10 measurement results displayed sequentially.
9. By pressing the "Measure" button (d), you exit the recall mode.
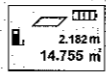
Area calculation:
1. Before starting the measurement, press the 🔲 button (i).
2. The flashing ⬭ symbol indicates that the first measurement can be carried out.
3. Press the "Measure" button (d). The laser beam is activated.
4. Aim at your target and press the "Measure" button (d) again, in order to carry out the length measurement. The result will be shown to you in the display (b).
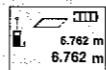
5. The flashing ⬭ symbol indicates that the second measurement can be carried out.
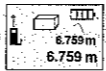

6. Aim at your target and press the "Measure" button (d) again, in order to carry out the width measurement.
7. The result of the second measurement will be displayed to you in the top row. The surface area will be displayed to you in the second row.
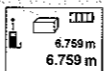

8. Press the "Recall" button (c), in order to display the previous measurements. With the "+" and "-" buttons (l + m), you can have the last 10 area measurement results displayed sequentially.
9. By pressing the "Measure" button (d), you exit the recall mode.
10. You can add and/or subtract any number of surface areas. After calculating the first surface area, press the "+" or "-" (l+m) button or start again with step 3.
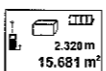
Volume calculation:
1. Prior to starting the measurement, press the 🔲 button (j).
2. The flashing 🔲 symbol indicates that the first measurement can be carried out.
3. Press the "Measure" button (d). The laser beam is activated.
4. Aim at your target and press the "Measure" button (d) again, in order to carry out the width measurement. The result will be shown to you in the display (b).


5. The flashing 🔲 symbol indicates that the second measurement can be carried out.

6. Aim at your target and press the "Measure" button (d) again, in order to carry out the height measurement.
7. The result of the second measurement will be displayed to you in the top row. The surface area will be displayed to you in the second row.

8. The flashing symbol 🔲 indicates that the third measurement can be carried out.
9. Aim at your target and press the "Measure" button (d) again, in order to carry out the depth measurement.
10. The measurement result of the third measurement will be displayed to you in the top row. The volume will be displayed to you in the second row.
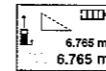

---
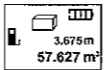
11. Press the "Recall" button (c), in order to display the previous measurements. With the "+" and "-" buttons (l + m), you can have the last 10 volume measurement results displayed sequentially.
12. By pressing the "Measure" button (d), you exit the recall mode.
13. You can add and/or subtract any number of volume areas. After calculating the first volume area, press the "+" or "-" (l + m) button or start again with step 3.

Pythagorean function:
The Pythagorean function enables an indirect length measurement. This is for the purpose of measuring distances, which cannot be measured directly, as an obstacle would obstruct the beam or no target surface is available as a reflector. Correct results are only achieved if the laser beam and the sought distance form an exact right angle (Pythagorean theorem). Ensure that the reference point of the measurement (e.g. housing end of the laser measurement device) for both measurements is in exactly the same place.

1. Prior to starting the measurement, press the 🔲 button (j).
2. The flashing ◿ symbol indicates that the first measurement can be carried out.
3. Press the "Measure" button (d). The laser beam is activated.
4. Aim at your target and press the "Measure" button (d) again, in order to carry out the first measurement. The result will be shown to you in the display (b).

5. The flashing ◿ symbol indicates that the second measurement can be carried out.
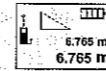
6. Aim at your target again and press the "Measure" button (d) again, in order to carry out the hypotenuse (diagonal) measurement. Do not remove the laser measurement device from its position.
7. The measurement result of the second measurement will be displayed to you in the top row. The determined indirect length will be displayed to you in the second row.
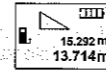
8. Press the "Recall" button (c), in order to display the previous measurements. With the "+" and "-" buttons (l + m), you can have the last 10 Pythagorean measurement results displayed sequentially.
9. By pressing the "Measure" button (d), you exit the recall mode.

Battery change:
When the battery performance becomes too weak, the "Low Battery" message will appear in the display (b). In order to change the battery, open the battery compartment on the back of the device. Discharged batteries must be properly disposed of.
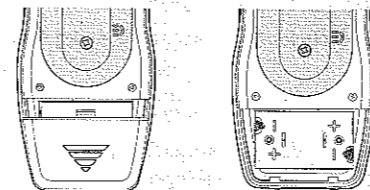
Error messages:
The following error messages can appear in the display (b):

Conditions too bright - The surroundings are too bright. Darken the room somewhat
Target too dark - The surface of your target is not reflecting the light sufficiently Brighten the target surface e.g. with a white sheet of paper
Target out of range - The measurement range of 0.30 - 50 m has been undercut or exceeded
Temperature too high - The temperature is above 40°C. The device can only be used in a temperature range of 0 – 40°C
Temperature too low - The temperature is below 0°C. The device can only be used in a temperature range of 0 – 40°C
Low Battery - The battery performance is too weak. Change the battery.
Strong vibration - The laser measurement device has been moved too much during the measurement. Keep the device as still as possible during measurement
Wrong input - The hypotenuse (diagonal), which you have measured in the Pythagorean mode, is shorter than the previous, measured length. In this function, always measure the longer side first

---

Safety instructions:
Never look directly into the laser beam. The beam can damage your eyes permanently. Do not aim the laser beam at persons or reflective surfaces.
Keep the work area clean and tidy. Avoid subjecting the device to blows and impact forces.
Never expose the laser distance measurer to damp and rain.
Keep the laser distance measurer in a dry, safe place.
If you do not intend to use the laser distance measurer for some time, remove the batteries to avoid battery leakage.
Check the laser distance measurer and all individual parts for damage before use. Only use the device if all parts are in a proper and correct condition.
Only qualified personnel are permitted to conduct repairs.
Only use the laser distance measurer for the measuring activities indicted in the operating instructions.
Only use parts and accessories that are explicitly recommended for use with the laser distance measurer.
Any manipulation intended to increase the laser performance is forbidden.
No liability can be assumed for any damage that results from the non-observance of these safety instructions.
The laser pointer contains no service parts. This is why we ask you not to open the casing as this results in expiry of the guarantee.
Keep well away from the reach of children.

> **Results obtained by using the laser distance measurer must always be checked. kwb cannot assume liability for measurement errors and consequential damage resulting from the same.**

Laser beam, do not look into beam!	**Laser class 2 pursuant to EN 60825-1/:1994+ A1:2002+A2:2001**

Technical specifications:
Wave length: 635nm
Power supply: 2 x 1,5V AA
Maximum energy output: 1mW
Measuring range: 0,30 – 50m
Accuracy: +/-3mm

CE STATEMENT OF CONFORMANCE
We, kwb-Karl W. Burmeister GmbH & Co. KG, ake sole responsibility in declaring that the laser distance measurer referred to in this declaration complies with the following standards: EN 60825-1:1994 + A2 : 2001+ A1: 2002, EN 61010-1:2001, EN 61326/A3:2003, EN 61000-4-2/A2:2001 EN 61000-4-3:2002 and the provisions of the directive 2004 /108 / EC

kwb Karl W. Burmeister
GmbH & Co.KG
28816 Stuhr · Germany

kwb Produktentwicklung

⚠	**Caution!** Electrical devices that are no longer usable do not belong in household waste. Please take these to the collection centre, which is responsible for you.