# profi
## scale

QUADRO

0,5 – 32 m

0,5 – 32 m

m²/m³
ft²/ft³

precision
±1%

# ProfiScale QUADRO
# Distance meter

*en* **Operating instructions**

**www.burg-waechter.de**

# EXTRA

+  + 9V
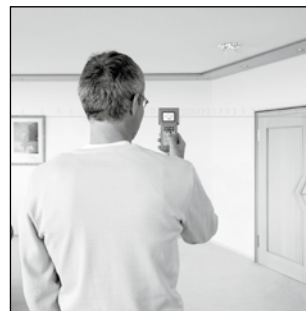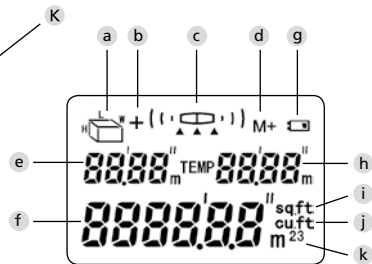
## Introduction

Imagine standing in the middle of a room and being able to measure distances, areas and the room's volume with absolute precision, without having to move around or hold the device against the wall. That's exactly what the ProfiScale QUADRO distance measuring device allows you to do. You start by using the integrated laser pointer to select the measuring points. The device then calculates the distances precisely using ultrasound and it can even measure in two directions simultaneously. You can add or multiply the measurement results as required for further calculations. It couldn't be easier or quicker.

The QUADRO PS 7350 bidirectional distance meter is a Class II laser tool and conforms to safety standard EN 60825-1:1994 + A1:2002 + A2:2001

## Illustration

A  Output for ultrasonic sensor
B  Laser pointer/light pointer
C  Two-row LCD display: data on the top row displays the current reading. The data on the bottom row displays the reading in the memory.
D  "BASE" key: measurement basis selector button
   To switch off the device, press this button for two seconds.
E  "M" button: memory button
F  "MODE" button: conversion mode
   Three conversion modes: length, area, volume (default setting: length measurement). Press the button for two seconds to measure the ambient temperature.
G  "RM" button: recall memory button
   Holding the button down longer than two seconds allows you to switch between metric and imperial units of measurement.
   (default setting: metric units of measurement)
H  "READ" button: start and test button
I  "+/=" button: memory addition/summing-up button.
J  Wasserwaage Libellen
K  Battery cover

## Display

a  Length, area and volume measurement; L=Length, W=Width, H=Height
b  Plus
c  Measuring position
d  Memory
e  Left reading
f  Overall result (total from left and right reading)
g  Battery display
h  Right reading
i  Square foot
j  Cubic foot
k  Metre/square metre/cubic metre

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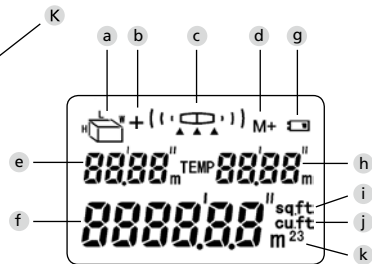
## Safety instructions

**Failure to observe the following instructions may result in personal injury:**

1. Before using the device, you must read these instructions carefully to ensure that you operate the device safely. Keep these instructions in a safe place.
2. The warning label(s) on the device must never be obscured or removed from the device.

**Caution – Laser radiation
Do not stare into beam**

**EN 60825-1:1994 + A1:2002 + A2:2001
$P_{max} < 1\,mW$; $λ = 630 – 660\,nm$**

3. Before using the device for the first time, apply the warning labels provided in your national language.
4. Never point the laser beam at the eyes of other persons or animals. Never look into the light beam yourself and do not use optical devices to focus the laser light. To do so may damage your eyes.
5. Do not allow children to operate the laser measuring tool. They may inadvertently injure themselves or others.
6. Do not operate the device at eye level or close to reflective surfaces, as these may reflect laser beams into your eyes.
7. Always switch off the laser when you have finished working or if you are not using it for some time.
8. Keep the device away from children and unauthorized persons.
9. For safety reasons and to maintain the warranty on the device, repairs must only be carried out by qualified personnel using genuine parts.
10. Never expose the device to an electric voltage, as this could damage the electronics.
11. Do not use the device in the vicinity of inflammable or explosive gases.
12. Do not use the device if it is defective.
13. Handle the device with care and do not drop it.
14. To avoid functional errors, do not dismantle the device.
15. Keep the device clean and dry.
16. When not in use, the device should be stored in the bag supplied.
17. Avoid contact with water and dust.
18. Do not use abrasive cleaners or solvents to clean the device. Use a damp cloth and mild detergent.
19. Check the battery/batteries regularly to avoid damage.
20. Remove the battery if you are not going to use the device for a long period.

## Warranty

Congratulations!
Thank you for choosing ProfiScale quality measuring technology by BURG-WÄCHTER. BURG-WÄCHTER offers a warranty of 2 years' duration from the date of purchase. The warranty does not cover damage caused by improper use, overloading the device or incorrect storage as well as normal wear and defects that only have an insignificant effect on the value or usability of the device. The warranty shall be immediately invalidated if unauthorized persons work on the device. In the event that a warranty claim arises, please hand over the entire device incl. packaging, description and batteries along with the sales receipt to your dealer.

## Technical data

| Effective measuring range | One-sided measurement: 0.5 – 16 m<br>Bidirectional measurement: 1 – 32 m |
|---|---|
| Max. measuring distance | 40 m (in the standard test procedure) |
| Accuracy | ±1 % ±1 decimal place |
| Standard selection | Left corner, mid-point, right corner |
| Resolution | 0.01 m |
| Laser wavelength | 630 – 660 nm |
| Laser class | Class II |
| Power supply | 9 V compound (e. g. 6LR61) |
| Backlighting | The backlighting switches off automatically after 15 seconds if the device is not being used. (Press any button to switch the backlighting back on again). |
| Automatic switching off | If not in use, the device switches off automatically after 60 seconds. |
| Operating temperature | 0 °C to 40 °C (32 °F to 104 °F) |

## Operating the device

### Fitting batteries

Open the battery compartment cover on the rear of the device and insert a 9 volt compound battery. Observe the correct polarity. Then close the battery compartment cover again.

### Instructions

**A** The object to be measured must have a normal, large, smooth surface. No obstacles may be present in the measurement path.
**B** If the surface to be measured is too small, a cardboard box must be placed on the object to be measured in order to increase the measuring surface.
**C** The device cannot measure through glass.
**D** A clearance of at least 50 cm from the object to be measured must be observed.
**E** If the device switches off automatically or is manually switched off, it can only be restarted after 5 seconds.

### Measuring distance
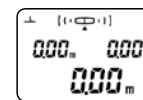
Using the ultrasonic sensor, aim at the object to be measured (e.g. the wall) and hold the device horizontally with respect to the object. Ensure that the spirit level display is between the two lines.

Press the "READ" button to switch on the device. The measuring instrument is now ready.

Press the "READ" button again to take a reading.

The top row of the display contains a left and a right reading. The sum of the two readings is displayed in the bottom row. The laser beam indicates the measurement mid-point.

Press the "READ" button again and move the device to take more readings. The distance measured is displayed on the upper part of the display.
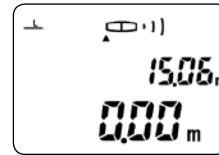
F
E
D
I
G
H
C
J
A
B

K

a  b    c      d  g

e                    h
            TEMP        i
f                    j
                     k

**88.88**" TEMP **88.88**"m
**888888.8** sqft
cu.ft
m²³

Press the "BASE" button once to change the measuring basis. Keep pressing the button to select one of the following five **basic settings:**

15.08ₘ   15.02ₘ
30.10ₘ

15.06ₘ
0.00ₘ

1. Default setting is bidirectional measurement

2. Measure to the right, starting on the left

14.98ₘ
0.00ₘ

15.04ₘ
0.00ₘ

3. Measure to the right, starting on the right

4. Measure to the left, starting on the left

15.12ₘ
0.00ₘ

5. Measure to the left, starting on the right

**Mean value display:** in the bidirectional measurement mode, if the device has recorded the mean value (the distance to both sides is then identical), a signal sounds. In the intervening time, a basic setting symbol and two ultrasonic symbols flash in the display.

**Select unit of measurement:** press the "RM" button for two seconds to select the unit of measurement: metric or imperial units of measurement. (default setting: metric units of measurement)

**Switch off:** press the "BASE" button for two seconds to switch off the device. The device will in any case automatically switch off after 60 seconds if it is not being used.
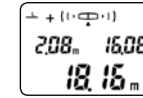
## Addition (without using the M memory)

15.08ₘ   15.02ₘ
30.10ₘ
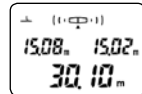
Press the "READ" button for measurements. The reading appears in the upper part of the display.
*Remark: If you are taking bidirectional readings, the left and right readings are added together and displayed in the lower part of the display*

0.00ₘ   0.00ₘ
30.10ₘ

Press the "+/=" button to activate the addition mode. The "+" symbol appears in the upper part of the display. At the same time, the previous reading appears in the lower part of the display.
*Remark: 1. The first time you press the "+" button, the initial data is added together in the lower part of the display and the data in the upper part is reset to "0".*

2.08ₘ   16.08ₘ
18.16ₘ

*2. Press the "READ" button for the second measurement. The reading is shown in the display.*
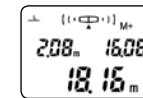
0.00ₘ   0.00ₘ
48.26ₘ

Press the "+/=" button again so that the new reading can be displayed in the lower part of the display.
*Remark: If you hold down the "+/=" button twice in succession, the addition function is cancelled and all previously saved readings are deleted.*

Repeat the last two steps to retain the addition function.

## Addition (using the M memory)

15.08ₘ   15.02ₘ
30.10ₘ

Press the "M" button to save the first reading. An "M+" appears in the right corner of the display.

2.08ₘ   16.08ₘ
18.16ₘ

Press the "READ" button to take and display another measurement.

0.00ₘ   0.00ₘ
30.10ₘ

Press the "RM" button to recall previous readings for addition (these are shown in the lower part of the display). At the same time, the "M+" symbol disappears and all saved values are automatically deleted.

0.00ₘ   0.00ₘ
48.26ₘ
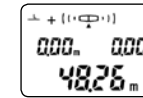
Press the "+/=" button for totalling. The result of the data store and the reading are displayed in the lower part of the display. At the same time, the "+" symbol appears in the upper part of the display.

*Remark: 1. If you hold down the "+/=" button twice in succession, the addition function is cancelled and all previously saved readings are deleted. 2. If you press the "M" button again, the device saves the result in the lower part of the display. The device adds the values together.*
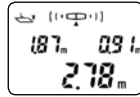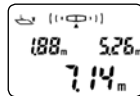
## profi scale

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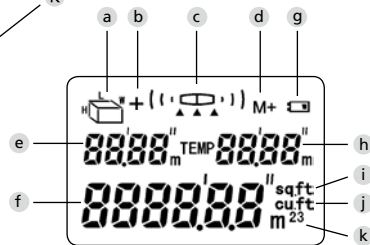
### Measuring area

Press the "MODE" button to access the area measuring mode. The ⌁ symbol appears in the display.

*0.00 m   0.00 m*
*0.00 m*

The "L" symbol flashes in the display and shows the length measurement. Press the "READ" button to start the length measurement and to show the result in the display. *(Step 1)*

*1.87 m   0.91 m*
*2.78 m*

The "W" symbol flashes in the display to show which measured value is next. Press the "READ" button to start the width measurement. The result appears in the display. *(Step 2)*

*1.88 m   5.26 m*
*7.14 m*
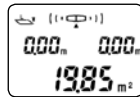
If the ⌁ area symbol flashes in the display, press the "READ" button to display the result in the lower part of the display. The ⌁ symbol is now no longer flashing. *(Step 3)*

*0.00 m   0.00 m*
*19.85 m²*

If you press the "READ" button again, you can switch back and forth between the length, width and the area reading. The relevant symbols "L", "W" and ⌁ are displayed and flash in the display. During this time, you cannot take any measurements.

Press the "MODE" button again to delete the data.
You can now begin taking a new measurement.

### Addition of areas in the area mode

Press the "M" button to save the result of the measured area in the lower part of the display. At the same time, the "M+" symbol appears in the display. *(Step 1)*

*0.00 m   0.00 m*
*19.85 m²*
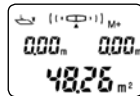
Press the "MODE" button again to start the second measurement and the calculation. Follow steps 1, 2 and 3 for area measurement. *(Step 2)*

*0.00 m   0.00 m*
*48.26 m²*
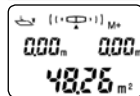
After you have received the second calculation, press the "+/=" button to access the addition mode. The "+" symbol appears in the display.
***Remark:*** *If you hold down the "+/=" button twice in succession, the addition function is cancelled and the "+/=" symbol disappears from the display. Briefly press the "+/=" button to activate the addition function. Briefly press the "+/=" button twice to deactivate the function. (Step 3)*

*0.00 m   0.00 m*
*48.26 m²*

Press the "RM" button to recall first area measured. The "M+" symbol disappears and the stored data is automatically deleted. *(Step 4)*

*0.00 m   0.00 m*
*19.85 m²*

Press the "+/=" button again. The sum of both areas appears in the lower part of the display. *(Step 5)*

*0.00 m   0.00 m*
*68.11 m²*

Repeat the steps mentioned above to retain the addition function.

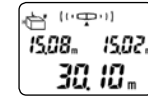Repeat steps 1 – 5 mentioned above to remain in the area addition mode.
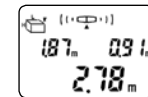
### Volumes

Press the "MODE" button to go to the volume calculation mode. The ⌁ symbol appears in the display.

*0.00 m   0.00 m*
*0.00 m*

The "L" symbol flashes in the display and shows the length measurement. Press the "READ" button to start the length measurement and to show the results in the display. *(Step 1)*

*2.08 m   16.08 m*
*18.16 m*

The "W" symbol flashes in the display to show which measurement comes next. Press the "READ" button to start the width measurement. The result is shown in the display. *(Step 2)*

*15.08 m   15.02 m*
*30.10 m*

The "H" symbol flashes in the display to show which measurement comes next. Press the "READ" button to start the height measurement. The result is shown in the display. *(Step 3)*

*1.87 m   0.91 m*
*2.78 m*

The volume symbol ⌁ flashes in the display. Press the "READ" button to show the result in the lower part of the display. The symbol now stops flashing. *(Step 4)*

*0.00 m   0.00 m*
*1519.59 m³*

Press the "READ" button again to switch back and forth between the length, width and height measurement. The corresponding symbols "L", "W" and "H" are displayed. While this is happening, you cannot take any measurements.
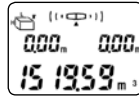
Press the "MODE" button to delete the data from the display.
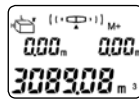You can now start a new volume measurement.

*C*
*F*
*D*
*E*
*I*
*G*
*H*
*J*

*A*
*B*

*K*
*a  b   c   d  g*
*e*
*h*
*i*
*f*
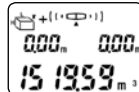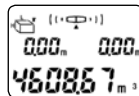*j*
*k*

BASE, MODE, M, +/=, RM, READ

## profi scale
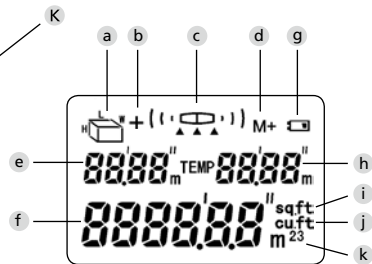


## Adding volumes in the volume mode

Press the "M" button to save the reading of the measured area in the lower part of the display. At the same time, the "M+" symbol appears in the display. *(Step 1)*

Press the "MODE" button again to start the second measurement and the calculation. Follow the steps 1, 2, 3 and 4 in the volume measurement. *(Step 2)*

After you have received the second calculation, press the "+/=" button to go to the addition mode. The "+" symbol appears in the display.
*Remark: If you hold down the "+/=" button twice in succession, the addition function is cancelled and the "+/=" symbol disappears from the display. Briefly press the "+/=" button to activate the addition function. Briefly press the "+/=" button twice to deactivate the function. Press the button again to switch back and forth between activating and deactivating the addition function. (Step 3)*

Press the "RM" button to recall the first volume reading. The "M+" symbol disappears and the saved data is automatically deleted. *(Step 4)*

Press the "+/=" button again. The total of both volumes appears in the lower part of the display. *(Step 5)*

Repeat steps 1 – 5 described above to retain the volume addition function.

## Temperature display

Hold down the "MODE" button for two seconds. The ambient temperature appears in the lower part of the display (it is measured in °C if the unit of measurement is m and in °F if the unit of measurement is ft/in). Press the "READ" button again to return to the measurement status.

| TEMP | TEMP |
| --- | --- |
| 25°C | 77°F |
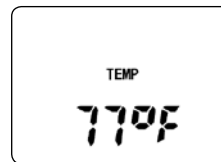
## Important information/troubleshooting

| Problem | Behebung |
| --- | --- |
| If you restart the device with a time delay of less than 5 seconds, you see an incorrect display or no display when you press a button. | Remove and re-insert the battery to access the original display. |
| Incorrect and inaccurate measurements: the symbol appears continuously in the display. | Change the batteries. |
| The error message "Err" appears in the display. | The measured value is outside the measuring range. |

Err 15.02m
Err
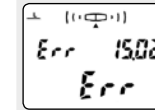
**A** Ensure there are no other sources of ultrasound or high-frequency interference in the vicinity.
**B** Ensure there are no obstacles between the device and the surface to be measured.
**C** Ensure the surface to be measured is level.
**D** Note that temperature and air humidity can affect the accuracy of the measurement. The temperature of the device should be adjusted to the ambient temperature, especially when taking readings over long distances between 12 m and 16 m. The air humidity should be above 48%.
**E** The opening of the ultrasonic sensor should be pointed directly at the surface to be measured.

## Disposing of the device

**Dear Customer,**
please help to reduce waste. Should you decide to dispose of the device, please bear in mind that many of the components it contains are made from valuable material that can be recycled.
Please do not throw the device into the normal waste bin. Contact the responsible office in your area and ask about collection points for electrical waste.