



# User Manual

Distance Meter PCE-LDM 45



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski, русский, 中文) can be found by using our product search on: [www.pce-instruments.com](http://www.pce-instruments.com)

Last change: 11 October 2018  
v1.0



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## 1 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. Damage or injuries caused by non-observance of the manual are excluded from our liability and not covered by our warranty.

- The device must only be used as described in this instruction manual. If used otherwise, this can cause dangerous situations for the user and damage to the meter.
- The instrument may only be used if the environmental conditions (temperature, relative humidity, ...) are within the ranges stated in the technical specifications. Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not immerse the PCE-LDM 45 in water.
- Do not expose the device to shocks or strong vibrations.
- The case should only be opened by qualified PCE Instruments personnel.
- Never use the instrument when your hands are wet.
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth. Use only pH-neutral cleaner, no abrasives or solvents.
- Do not use alcohol or any other organic solvent for cleaning the lens.
- Do not touch the lens and avoid contact with rough material.
- The device must only be used with accessories from PCE Instruments or equivalent.
- Before each use, inspect the case for visible damage. If any damage is visible, do not use the device.
- Do not use the instrument in explosive atmospheres.
- The measurement range as stated in the specifications must not be exceeded under any circumstances.
- The PCE-LDM 45 is a class II laser product. Do not stare into beam at any time when operating this product, even with optical aids like a binocular or telescope.
- Do not remove any safety labels on this product.
- Observe the specified DC voltage.
- Non-observance of the safety notes can cause damage to the device and injuries to the user.

We do not assume liability for printing errors or any other mistakes in this manual.

We expressly point to our general guarantee terms which can be found in our general terms of business.

If you have any questions please contact PCE Instruments. The contact details can be found at the end of this manual.

## 2 Delivery contents

- 1 x distance meter PCE-LDM 45
- 2 x AAA 1.5 V battery
- 1 x user manual



### 3 Basic functions and features

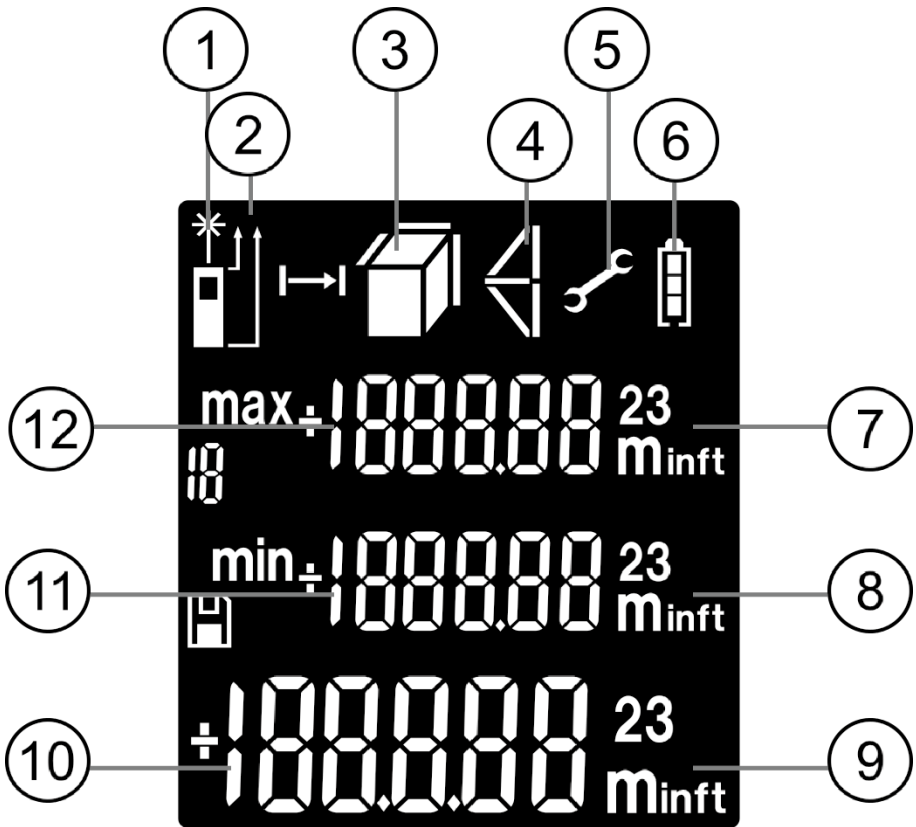
- Single Measurement
- Max. / Min. Measurement
- Continuous Measurement
- Area / Volume / Pythagoras
- Unit Setting
- Reference Setting
- Bubble level
- Buzzer Indicator
- Historical Data Records: up to 20 (19 in memory + current value)
- Battery Indicator
- Laser Auto Switch off: 30 s
- Instrument Auto Switch off: 180 s

### 4 Technical specifications






Distance measuring range	0.05 ... 40 m / 0.7 ... 55.8 ft
Measurement accuracy	<10 m: $\pm 2$ mm > 10 m $\pm 2$ mm + 0.05* (measuring distance - 10)
Resolution	1 mm
Units	m, inch, ft, m <sup>2</sup> , ft <sup>2</sup>
Measurement functions	Single measurement Max / Min Function Continuous measurement Area calculation Volume calculation Pythagoras function
Laser class	Class II; <1 mW, 620 ... 690 nm
Measuring time single measurement	0.25 seconds
Power supply	2 x 1.5V AAA battery
Battery life	> 5000 individual measurements
Dimensions (L x W x H)	110 x 40 x 25 mm / 4.3 x 1.6 x 1 in
Weight	76 g / < 1 lb without batteries
Environmental conditions	0 ... 40°C / 32 ... 104°F
Storage conditions	-20 ... 65°C / -4 ... 149°F
Automatic shutdown laser	30 seconds
Automatic shutdown laser distance meter	180 seconds

## 5 Meter description

### 5.1 LCD



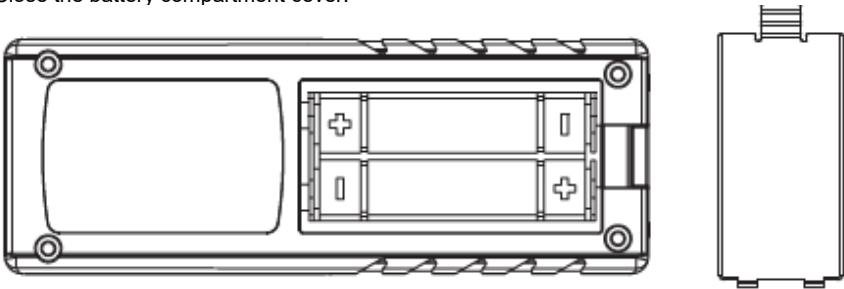
1	Laser "on"	7	Unit
2	Reference	8	
3	Area / volume	9	
4	Pythagoras function	10	Current reading
5	Hardware error	11	Intermediate value
6	Battery status	12	

Key	Function
	On/Measuring
	Measurement Reference
	Plus//Minus/Recall Data Records
	Clear/Off
	Functions

## 6 Start-up

### 6.1 Inserting the batteries

- According to figures, remove battery compartment cover.
- Insert batteries with correct polarity according to battery cover indications.
- Close the battery compartment cover.



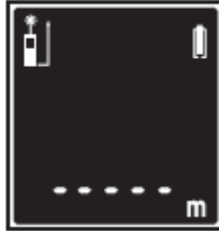
#### Notes:

- Please do not mix new and old batteries, use alkaline batteries or rechargeable batteries only.
- Please replace batteries when the symbol flashes permanently in the display.
- Please remove the batteries before any long period of non-use.

## 7 Equipment Operation

### 7.1 Switch on and off

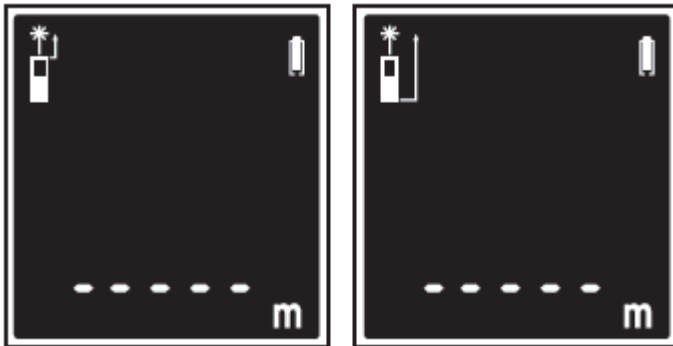
Push the On/Measuring button to switch on the equipment. The PCE-LDM 45 will show its start display as shown in the figure below. The unit of measurement last set is taken over.



The laser will be switched off automatically after 30 seconds and the equipment will be powered off after 3 minutes of inactivity ("Auto Off" function). Push and hold the Clear/Off button to switch off the equipment.

### 7.2 Change Measurement Reference

Default setting of measurement reference is rear edge. Push the Measurement Reference button to change the measurement reference to front edge.



### 7.3 Clear Button

Push the Clear/Off button to clear the last command or displayed data.

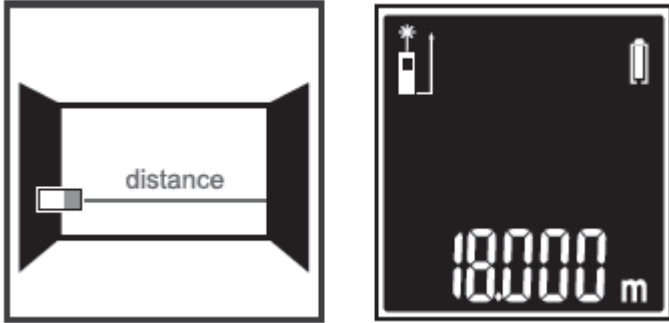
### 7.4 Unit Conversion

Push and hold the Functions button to switch the unit of measurement. Available units: m, ft and in.

## 8 Measurement

### 8.1 Single measurement mode

When the equipment is switched on, pushing the On/Measuring button will activate (or deactivate) the laser and aiming the laser onto the target and pushing the same button again will make a single measurement. The result will be displayed immediately as shown in the figure below.



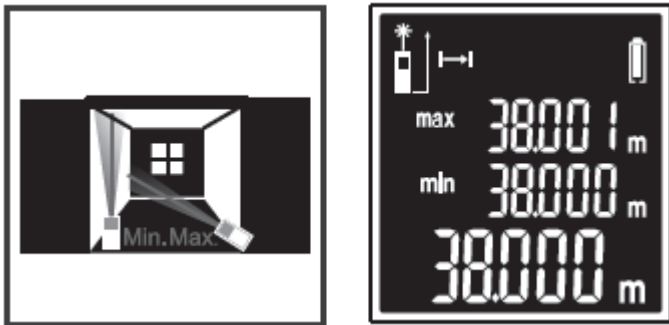
### 8.2 Continuous measurement mode

When the equipment is switched on, pushing and holding the On/Measuring button will activate continuous measurements.

MIN: MINIMUM VALUE

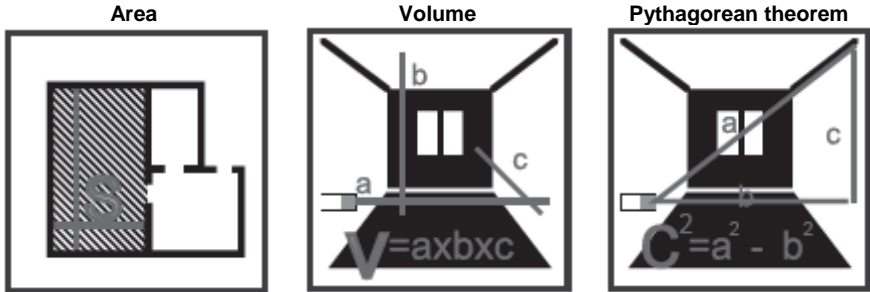
MAX: MAXIMUM VALUE

The current measurement value is displayed in the bottom line of the LCD as shown in the figure below.








## 9 Functions

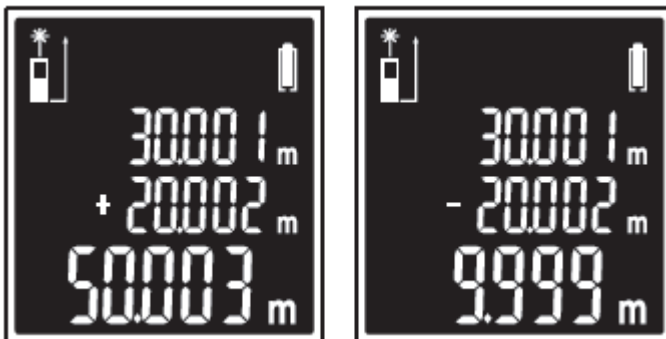


Push the Functions button to change the measurement function, see figure above. Select your desired function by pressing the button multiple times and start the measurement.

Measurement function	Icon
Area Measurement	
Volume Measurement	
Pythagorean Theorem	

### 9.1 Addition and Subtraction Functions

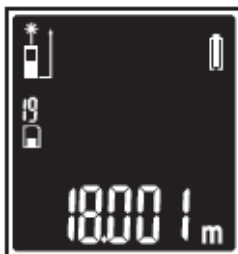
- + The current measurement result is added to the previous one
- The current measurement result is subtracted from the previous one, see the following figure



Key sequence			
<b>Addition</b>		<b>Subtraction</b>	
On/Measuring	Turn on laser	On/Measuring	Turn on laser
On/Measuring	Measurement	On/Measuring	Measurement
Plus//Minus		Plus//Minus	
On/Measuring	Turn on laser	Plus//Minus	
On/Measuring	Measurement	On/Measuring	Turn on laser
Plus//Minus		On/Measuring	Measurement
On/Measuring	Turn on laser	Plus//Minus	
On/Measuring	Measurement	Plus//Minus	
Plus//Minus		On/Measuring	Turn on laser
		On/Measuring	Measurement
		Plus//Minus	
		Plus//Minus	

## 9.2 Storage and Recall of Measurements

- 1) Measuring data will be stored automatically. Push and hold the Plus / /Minus / Recall Data Records button for 3 seconds to get to the saved readings. The display will appear as in the figure.
- 2) The number (up to 20) of saved readings is shown in the display.
- 3) Use the Plus / /Minus / Recall Data Records button to scroll through the saved readings.



## 10 Troubleshooting

Error code	Possible cause	Remedy
Err10	Battery too low	Change batteries
Err15	Out of range	Measure target within the range
Err16	Received signal too weak	Use light colour target; Hold Quick Measure more steady
Err18	Background brightness too high	Use dark coloured target
Err26	Out of display	

## 11 Warranty

You can read our warranty terms in our General Business Terms which you can find here: <https://www.pce-instruments.com/english/terms>.

## 12 Disposal

For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.

If you have any questions, please contact PCE Instruments.





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