



# Laserliner LaserRange-Master i5 Laser Range Finder Instructions

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**Laserliner**

**Laserliner LaserRange-Master i5 Laser Range Finder**



## Function / Application

Lengths, areas and volumes can be measured at a distance of up to 50 metres with this laser distance measuring device. Heights and distances can be determined indirectly using the angle function. The device is suitable for continuous measurement and offers a choice of front or rear housing reference points. Precise alignment can be achieved using the digital spirit level.

## General safety instructions

- The device must only be used in accordance with its intended purpose and within the scope of the specifications.
- The following persons may use the device only when they are either supervised by a person who is responsible for their safety or have received instruction from this person on how to use the device:
  - Persons with restricted physical, sensory or mental abilities
  - Persons with no knowledge and/or experience in the use of the device
  - Children (under the age of 14)
- The device and its accessories are not toys.
- Modifications or changes to the device are not permitted, this will otherwise invalidate the approval and safety specifications.
- Do not expose the device to mechanical stress, extreme temperatures, moisture or significant vibration.
- The device must no longer be used if one or more of its functions fail or the battery charge is weak.
- Note local and national safety instructions to ensure proper use of the device.

## Safety instructions

Using class 2 lasers

- Attention: Do not look into the direct or reflected beam.
- Do not point the laser beam towards persons.
- If a person's eyes are exposed to class 2 laser radiation, they should shut their eyes and immediately move away from the beam.
- Tampering with (making changes to) the laser device is not permitted.
- Under no circumstances should optical instruments (magnifying glass, microscope, binoculars)

#### Dealing with electromagnetic radiation

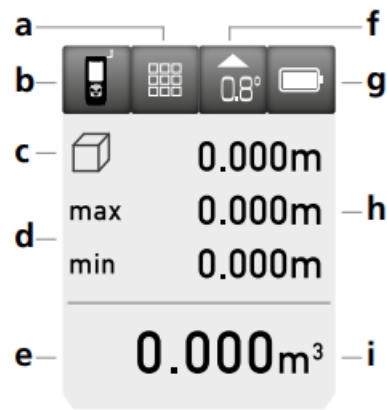
- The measuring device complies with electromagnetic compatibility regulations and limit values in accordance with EMC-Directive 2014/30/EU.
- Local operating restrictions – for example, in hospitals, aircraft, petrol stations or in the vicinity of people with pacemakers – may apply. Electronic devices can potentially cause hazards or interference or be subject to hazards or interference.
- The measuring accuracy may be affected when working close to high voltages or high electromagnetic alternating fields.

#### Inserting batteries



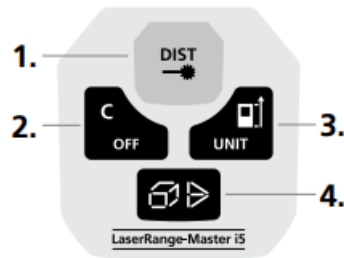
Open the battery compartment and insert batteries (2 x 1,5V LR6 (AA)) according to the symbols. Be sure to pay attention to polarity.

#### DISPLAY



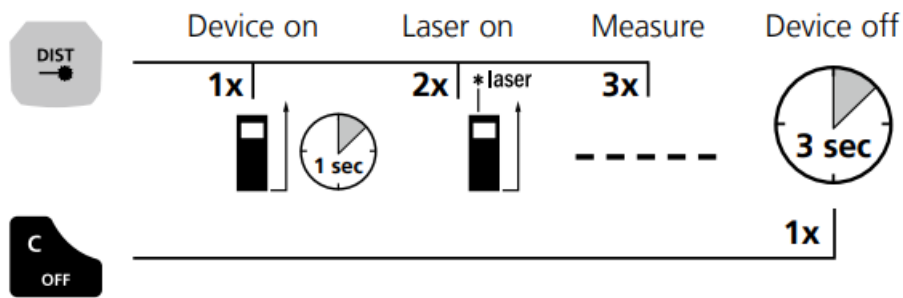
- **a** Function display
- **b** Measurement point (reference) rear / front
- **c** Display min./max. continuous measurement / area / volume / angle function 1 + 2 + 3
- **d** Min/max continuous measurement
- **e** Measurement values / measurement results / malfunction / service required
- **f** Slope angle device
- **g** Battery symbol
- **h** Intermediate values / min/max values
- **i** Unit m / inch / ft
- **j** Length measurement
- **k** Min/max continuous measurement
- **l** Area measurement
- **m** Volume measurement
- **n** Angle function 1
- **o** Angle function 2
- **p** Angle function 3
- **q** Digital bubble level
- **r** Tilt sensor calibration
- **s** Memory

## KEYPAD



1. ON / measure
2. Delete last measurement values / OFF
3. Measurement point (reference) rear / front / unit m / inch / ft
4. Length / min/max continuous measurement / area / volume / angle function 1 + 2 + 3 / digital bubble level / tilt sensor calibration / memory

#### Switch on, measure and switch off:



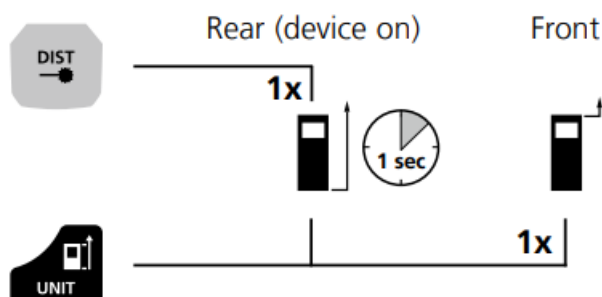
#### Change unit of measure:



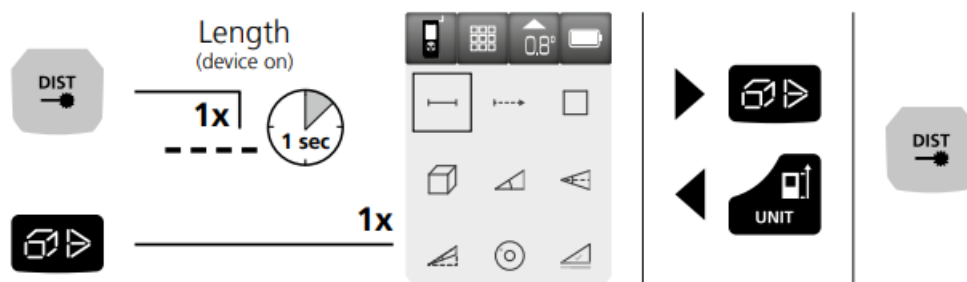
#### Delete the last measured value:



#### Change measurement point (reference):

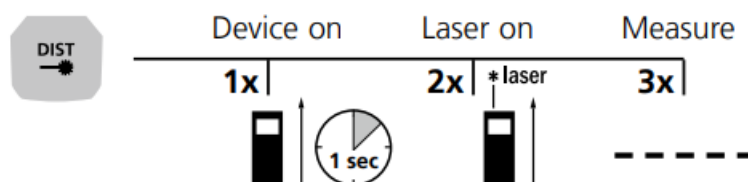


## To select functions

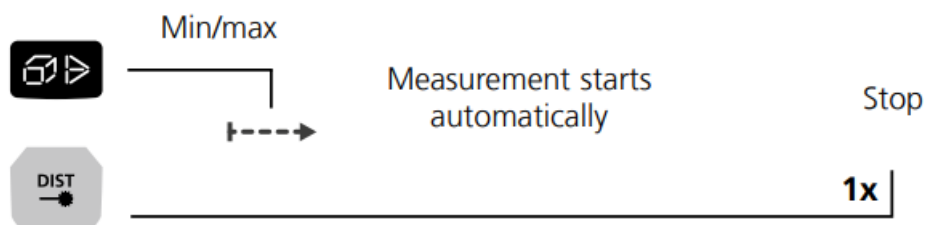


- Length / min/max continuous measurement / area / volume / angle function 1 + 2 + 3 / digital bubble level / tilt sensor calibration / memory

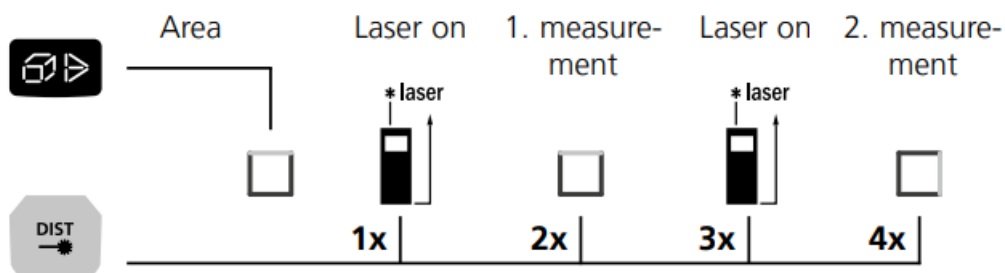
## Length measurement:



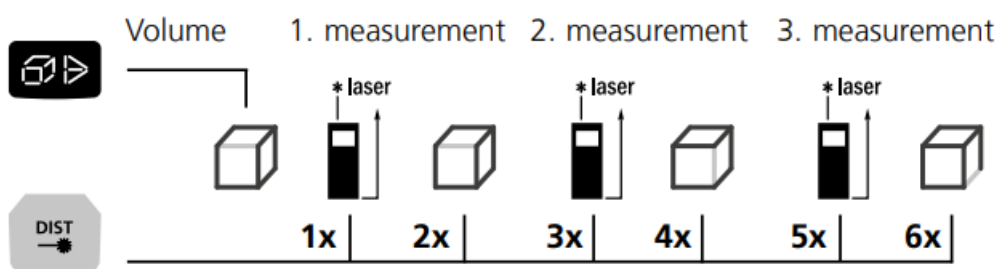
## Min/max continuous measurement:



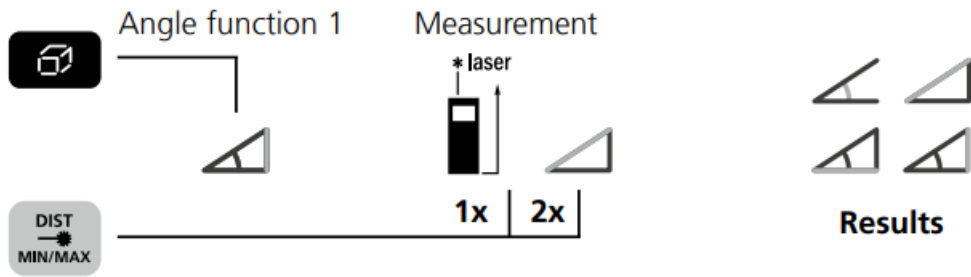
## Area measurement:



## Volume measurement:

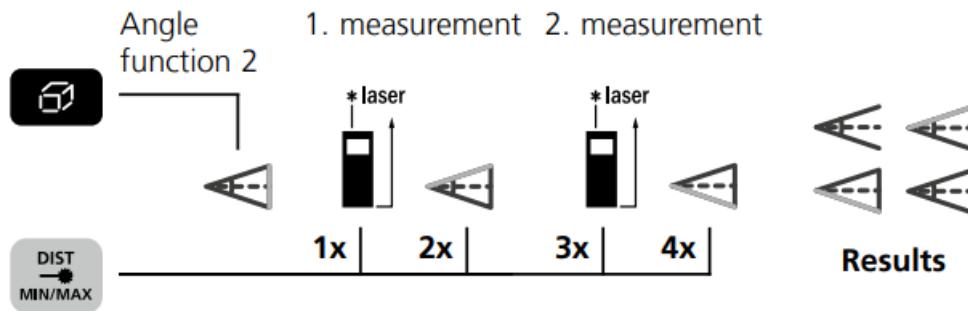


### Angle function 1:



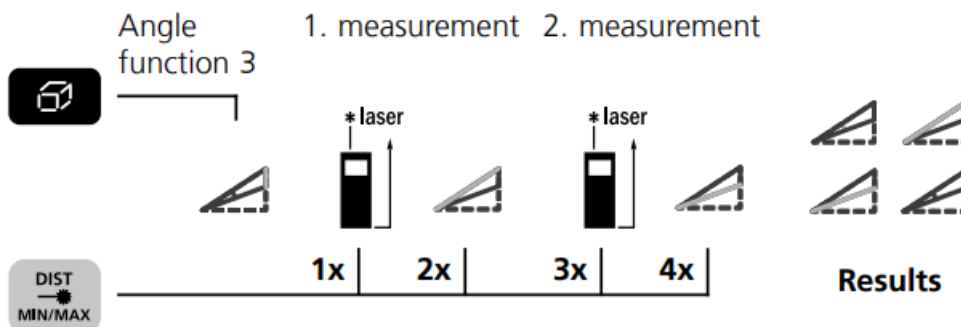
The measurement results are determined automatically by the 360° inclination sensor.

### Angle function 2:



The measurement results are determined automatically by the 360° inclination sensor.

### Angle function 3:



The measurement results are determined automatically by the 360° inclination sensor.

### Important notices

- The laser points to the location that will be measured. No objects may get into the laser's line of measurement.
- The device compensates the measurement for different room temperatures. Therefore allow the device a brief adaptation period when changing locations with large temperature differences.
- The device is only conditionally useable in outdoor areas and cannot be used in strong sunlight.
- The measurement results of outdoor measurements may be influenced or falsified by rain, fog and snow.
- In unfavourable conditions, e.g. with poorly reflecting surfaces, the maximum deviation may be greater than 3 mm.
- Carpeting, upholstery or curtains will not reflect the laser optimally. Measure to flat surfaces.
- Measurements made through glass (window panes) can falsify measurement results.
- An energy-saving function switches the device off automatically.
- Clean with a soft cloth. Water may not be allowed to penetrate the housing.

**Error codes:**

- **Err10:** Replace the battery
- **Err11:** Data transfer error
- **Err14:** Calculation error
- **Err15:** Outside the measuring range
- **Err16:** Received signal too weak
- **Err18:** Tilt sensor calibration error

**Information on maintenance and care**

Clean all components with a damp cloth and do not use cleaning agents, scouring agents and solvents. Remove the battery(ies) before storing for longer periods. Store the device in a clean and dry place.

**Calibration**

The measuring device should be calibrated and tested on a regular basis to ensure it is accurate and working properly. We recommend the measuring device is calibrated every 1 – 2 years. If necessary, contact your distributor or the UMAREX-LASERLINER service department.

**Technical Data**



<b>Technical Data</b> (Subject to technical changes without notice. 21W41)		
<b>Distance measurement</b>		
Precision (typical)*	± 1,5 mm	
Measurement range (inside)**	0,05 m – 50 m	
<b>Angle measurement</b>		
Measuring range	± 90°	
Resolution	0,1°	
Precision	0,1°	
Laser class	2 / < 1 mW (EN 60825-1:2014/AC:2017)	
Laser wavelength	635 nm	
Operating conditions	-10°C ... 40°C, max. humidity 20 ... 85% rH, no condensation, max. working altitude 2000 m above sea level	
Storage conditions	-20°C ... 70°C, max. humidity 80% rH	
Automatic switch-off	30 sec laser / 3 min device	
Power supply	2 x 1.5V LR6 (AA)	
Dimensions (W x H x D)	50 x 122 x 27 mm	
Weight	140 g (incl. batteries)	

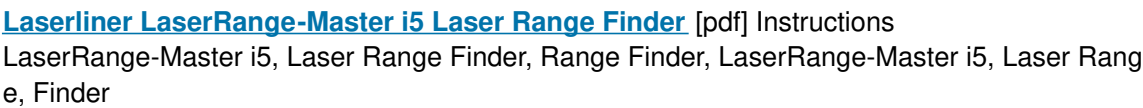
## Angle measurement

\* measuring distance up to 10 m with strongly reflective target surface and at room temperature. The measurement deviation may increase by ± 0.2 mm/m for greater distances and under unfavourable measuring conditions such as strong sunlight or weakly reflective target surfaces.

## EU directives and disposal

This device complies with all necessary standards for the free movement of goods within the EU. This product is an electric device and must be collected separately for disposal according to the European Directive on waste electrical and electronic equipment. Further safety and supplementary notices at: <http://laserliner.com/info?an=AIK>

## Documents / Resources



## References

-  [Info - Laserliner](#)
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