

# Instructions for use

## LI1 Laser Line Projection Angle Gauge



※Stand is a separate product and must be purchased separately

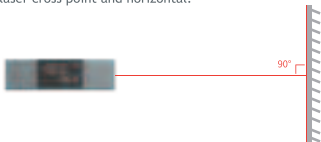
## Product Description

The Duke LI1 is a versatile, easy to use and versatile angle measuring tool with laser line projection for measuring 2-axis absolute and relative angles of surfaces.

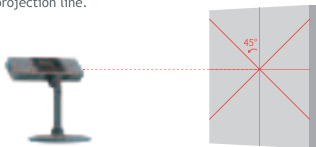


## Important Notes.

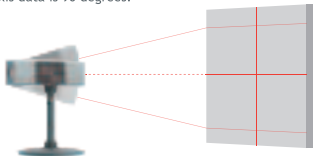
1. This machine laser casting line without automatic leveling function, need to follow the specific use It is necessary to follow a specific method to cast the line accurately.
2. If you need to project absolute horizontal and vertical laser lines, you need to keep the body of the machine absolutely horizontal and vertical, and let the projected laser cross point and horizontal.



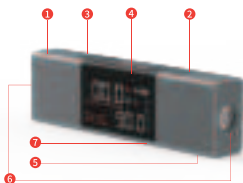
3. If you need to project the correct angle of the laser line, you need to keep the body of the machine water flat and perpendicular to the wall, and then rotate the body (Z axis), you can get the corresponding angle of the laser projection line.



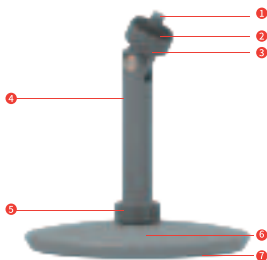
4. If you need to project horizontal and vertical laser lines of any height, you need to keep the machine body and the wall to maintain vertical, and ensure that the body Z axis data is 90 degrees.



## Product Briefing

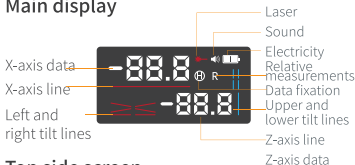


- ① Housing
- ② Power on/off button
- ③ Measurement keys
- ④ Display screens
- ⑤ Type-c charging port
- ⑥ Laser emission port
- ⑦ Fuselage fixing holes



- ① Upper strut
- ② Upper spacer
- ③ Upper knob
- ④ Main strut
- ⑤ Lower knob
- ⑥ Base
- ⑦ Double-sided adhesive film

## Main display



## Top side screen



## Start up

Short press the power button on the right side for about 1 second to power on.



## Shutdown

Long press the power button on the right side for about 2 seconds to turn off the power. No operation within 180 seconds will automatically shut down.



## Angle measurement

The main screen automatically displays the angle meter X, Z-axis real-time angle after power on, to be the screen data is locked after the instrument is stabilized.

Unlock mode:

- 1, any axis angle change more than 0.3 degrees automatically unlock;
- 2, short press the left key to unlock and enter the real-time measurement mode.



\*X-axis data: The angle data between horizontal fuselage and horizontal plane.

\*Z-axis data: The angle data between vertical fuselage and horizontal plane.

## Relative angle measurement

When switched on, the instrument enters the angle measurement mode by default, and when switched on.

### Relative measurement mode

Press and hold the left measurement key for 2 seconds to switch to the relative measurement mode R.



### Angle measurement mode

Press and hold the left-hand measurement key again for 2 seconds to switch to angle measurement mode.



\* Relative measurement mode: It means that the current angle of the horizontal body is used as absolute 0° to measure the angle change generated by the horizontal body displacement.

## The data shows

### Top side screen display

When the red line is lit, the current screen is displayed as X-axis data.



When the blue line is lit, the current screen is displayed for Z-axis data.



Once the measurement has stabilised, the X and Z axis data is fixed and displayed in rotation.

### Main screen display

The main screen displays both X- and Z-axis data during measurement.



## Laser on/off

Laser on: short press on the right button when switched on to project a crossed red laser.



Laser turn off: short press the right button again to turn off the laser line.



## How to use

### Bracket installation

②Align the end of the holder rod with the round base hole, press down and insert it into the base.



②The bottom of the bracket is screwed tightened and fixed.



③ Angle meter bracket top double locking screws, according to the use of the scene can be self Adjust the tightness.



## Bracket use:

1、Angle meter through the bottom screw. Rotate the access bracket. At this time, the angle meter can be tilted at any angle.



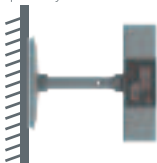
2、The angle meter holder spindle can 360 degree rotation.



3、After rotating to the desired angle, the spindle nut can be tightened to fix the spindle position.



4、The bottom of the holder is nano-glue, which can be adhered to the surface of the object after tearing the protective film. The surface of the object can be adhered after removing the protective film. When the adhesiveness of this nano-adhesive decreases, it can be washed to restore the adhesiveness and repeatedly It can be used repeatedly.



## Technical specifications

|                                 |   |
|---------------------------------|---|
| Product Name                    | LI1 Laser Line Projection Angle Gauge   |
| Product Size                    | 120*20*35mm   |
| Bracket size                    | 103*95mm  |
| Product weight                  | 95g   |
| Laser radiation level           | Class II (660±5nm, <1mW)<br>Laser power from the laser light<br>10cm test less than 1nW   |
| Peak power of the whole machine | 700mw   |
| Measurement accuracy            | ±0.5°   |
| Optimum operating range         | <10m  |
| Operating temperature           | -10°C~50°C  |
| Storage temperature             | -20°C~55°C  |
| Power supply                    | 730mAh rechargeable lithium battery   |
| Operating hours                 | Continuous endurance without laser: 33 hours<br>Single laser continuous battery life: 5 hours<br>Dual laser continuous battery life: 3.5 hours<br>Standby time: >300 days |

Note: Single/Double laser are two different versions of the product, depending on the version you purchase. It is recommended to use with the LI1 special stand for a wider range of applications and ease of use. Please contact customer service for advice and purchase.

## Safety instructions

- Be sure to read this instruction manual and its related safety information before using the product, and that the user fully understands and follows the relevant instructions.
- Do not expose the eye to the outgoing laser beam during operation, prolonged exposure to the laser beam may result in eye damage.
- Never look directly into the laser beam or at the laser beam directly through an optical instrument or place the laser at eye level.



- Do not allow children to operate the laser apparatus and, if not in use, keep the apparatus out of the reach of children.
- Class 2 laser beams are considered safe and eyelid reflexes (blinking) will usually provide adequate protection if inadvertently exposed to the laser; do not maliciously direct the laser at others
- The instrument needs to be placed smoothly when measuring horizontally to prevent as much shaking as possible in the hand and needs to be stable before reading.
- Do not use the product in flammable or explosive atmospheres as this may cause sparks, ignite dust or fumes.

## About Maintenance

- Do not disassemble the instrument parts or modify the instrument without permission, unprofessional disassembly will damage the instrument, if the instrument is damaged, please contact your local dealer.
- Please keep the laser output port clean, the outer parts can be cleaned and wiped with a damp cloth periodically, do not use solvents for cleaning.
- Do not dispose of this product with household waste, dispose of disused instruments or parts in strict accordance with local regulations.

## Special declaration.

We do not accept liability for any derivative results of the use of this product; we reserve the right to make changes to the design of the product, upgrades and the content of the manual without notice!



LASER RADIATION  
DO NOT STARE INTO BEAM  
CLASS 2 LASER PRODUCT  
MAXIMUM OUTPUT <1mW  
WAVELENGTH 660nm  $\pm$  5nm  
IEC/EN 60825-1:2014

## ATuMan.Simpler measurement

Shenzhen ATuMan Precision Machinery Technology Co;Ltd.

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