

# FL-30 Laser Distance Meter

## User Manual



# User manual

English



Congratulations on the purchase of this product.

Carefully read the safety instructions and the user manual before using this product.

The person responsible for the instrument must ensure that all users understand these directions and adhere to them.

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## 1. Safety Instructions

### Symbols Used

The following symbols are used to distinguish precautions by the degree of injury or damage that may result if the precaution is ignored.



Warning





Caution



Important paragraphs, which must be adhered to

### Use of the instrument

a) Press  to switch on the device. The laser beam emits from the front of the meter.

b) Press  again to measure the distance. The results will show on the screen.

### Cautions:

- Do not look straight at the laser beam
- Do not use the device in flammable and explosive environments
- Remove the batteries to avoid leakage if the device is not to be used for a long period of time

### Care

Wipe off dirt with a damp, soft cloth or a clean cloth moistened with alcohol. Be careful with the optical components (such as optical lens): wipe with a clean soft cloth or cotton swab moistened with distilled water (same as cleaning glass or camera lens). Do not use aggressive cleaning agents or solutions.

### Permitted use

Measuring distances, areas and volumes

## **Prohibited use**

- Using the instrument without instruction
- Using outside the stated limits
- Deactivation of safety systems and removal of explanatory and hazard labels.
- Opening of the equipment by using tools (screw drivers. etc.), as far as not specifically permitted for certain cases.
- Carrying out modification or conversion of the product
- Use of accessories from other manufacturers without the approval of our company.

## **Limits of use**

See section “Technical Data”

## **Responsibilities of the person in charge of the instrument**

### **Warning:**

The person responsible for the instrument must ensure that the equipment is used correctly and is responsible for training and safety of the equipment when in use. The person in charge of the instrument has the following duties:

- To understand the safety instructions of the product and the instructions in the user manual.
- To be familiar with local safety regulations relating to accident prevention
- To inform local dealer immediately if the equipment becomes unsafe.

## **Hazards in use**

### **Caution:**

Watch out for incorrect distance measurements. If the instrument is defected or if it has been dropped or has been misused or modified.

### **Precautions:**

- Carry out periodic test measurements, particularly after the instrument has been subject to abnormal use, and before, during and after important measurement.
- Make sure the optics are kept clean and undamaged

### **Caution:**

If the instrument is used for positioning moving objects (e.g. cranes, building

equipment, platforms, etc.) unforeseen events may cause invalid measurements

 **Warning:**

Flat batteries must not be disposed of with household waste.

The product must not be disposed of with household waste.

Take them to the collection points provided in accordance with national or local regulations.

## Electromagnetic compatibility (EMC)

The term "electromagnetic compatibility" means the capability of the product to function smoothly in an environment where electromagnetic radiation and electrostatic discharges are present, and without causing electromagnetic interference to other equipment.

 **Warning:**

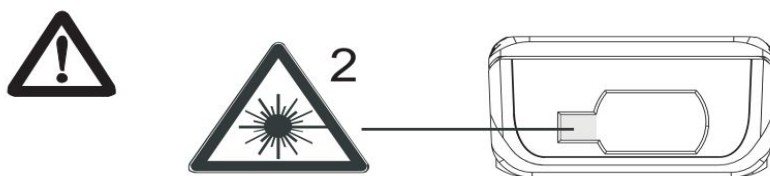
The product conforms to the most stringent requirements of the relevant standards and regulations. Yet, the possibility of it causing interference in other devices cannot be totally excluded.

 **Caution:**

Never attempt to repair the product yourself. In case of damage, contact ATP Instrumentation Ltd

## Laser classification

### Integrated distance meter



This product produces a visible laser beam, which emits from the front of the instrument.

It is a class 2 laser product in accordance with:

IEC60825-1:2007 “Radiation safety of laser products” laser class 2 products:  
Do not stare into the laser beam or direct it towards other people.

 **Warning:**

Looking directly into the beam with optical aids (e.g. binoculars telescopes) can be hazardous.

**Precautions:**

Do not look directly into the beam with optical aids.

 **Caution:**

Looking into the laser beam may be hazardous to the eyes.

**Precautions:**

Do not look into the laser beam. Make sure the laser is aimed above or below eye level.

## 2. Start-up

### 2-1 inserting/replacing batteries

- 1). Remove battery compartment lid and attach hand strap
- 2). Insert batteries
- 3). Close the battery compartment

Replace the batteries when the  symbol flashes permanently in the display.





Remove the batteries when the meter is not going to be used for a long period of time to avoid the danger of corrosion



Only use alkaline or rechargeable batteries


## 3. Menu Functions

### 3-1. Changing unit of measurement


Press  to turn the meter on and press and hold  for a while to

change the unit of distance measurement. The following units are available: m (meter), ft (feet), in (inch), ftin (feet-inch 1/16) or ruler



### 3-2 Turn on the laser

To turn the laser on, press  button.

Aim the laser at a target and press  button again. Display shows measurement result.



Press  button to clear the measurement and turn the laser off.


### 3-3 Screen Change

Press   together to change the direction of the screen display


## 4. Operation

### 4-1 Switching the meter on/off





Press  to turn the instrument and laser on. The display shows the battery symbol until  is pressed again.

Press and hold  button to turn the instrument off  
The instrument switches off automatically after three minutes of no activity.


### 4-2. Clear Button

Press  button to cancel the last action. While making area or volume measurements, each single measurement can be deleted and re-measured in succession.


### 4-3 Reference Setting

The default reference setting is from the rear of the instrument. Press  the display will show you.  Press  button, will measure the reference edge fixed to the front. The display will show you. 

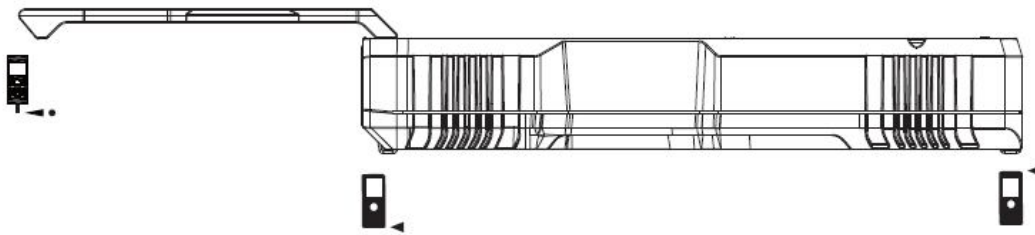


Press the  button, the rear reference is set again.

Press the two arrowed button on the base of the meter to pull out the belt buckle and turn it the other way round to extend the length of the device, you can measure from

the corner. Press this button , a measurement will be extended along as the

reference edge, the display will show you.





## 5. Measuring

### 5-1 Single Distance Measurement


Press  to activate the laser. Press  again to trigger the distance measurement. The result is displayed immediately.


### 5-2. Continuous Measurement


Press and hold down  button for 2 seconds to make continuous measurements. Press  again to stop continuous measurement.

## 6. Functions

### 6-1 Area

Press  once to enter into area mode.


Press the  button to take the first length measurement (e.g. length).


Press  again to take the second length measurement (e.g. width) . The result





is displayed in the summary line.

## 6-2 Volume

Press  button twice to enter into volume mode.

Press  button to take the first measurement (e.g.length).





Press  button to take the second measurement (e.g.width)

Press  button to take the third measurement (e.g.height)

The volume result appears in the summary line.

## 7. Appendix

### 7-1 Message Codes

Icon	Cause	Solution
	Calculation error. Signal is too weak or too strong, or measurement time is too long.	Reoperation, change to a better surface or use a target plate
	Ambient light is too strong	Change the light for measuring
	Temperature is too high (+40°C) or too low (0°C)	Cool down or warm up the instrument. This instrument works best at temperatures between 0°C to +40°C
	Hardware error	Switch on/off the instrument several times. If the symbol still appears, then your instrument may be defective. Please call ATP Instrumentation Ltd for assistance.

## 8. Technical Data

<b>Measuring Range</b>	0.05~30m
<b>Measuring Accuracy</b>	±2mm
<b>Display Accuracy</b>	1mm
<b>Laser Classification</b>	Class 2
<b>Pollution Degree</b>	2
<b>Laser Type</b>	620~690nm,<1mw 0.16x0.6 mrad,0.25s
<b>Area, Volume Measuring</b>	yes
<b>Continuous Measuring</b>	yes
<b>Show Beep</b>	yes
<b>Protection against splashes and dust</b>	IP54
<b>Temperature range for operation</b>	0~40°C
<b>Temperature range for storage</b>	-20~70°C
<b>Battery Life</b>	5000 Measurements
<b>Battery Selection</b>	LR3(AAA)2x1.5v
<b>Laser Switch-off Automatically</b>	After 30 seconds
<b>Instrument Switch-off Automatically</b>	After 3 minutes
<b>Dimensions</b>	118*37*25mm
<b>Weight</b>	70g
<b>Max Operating Altitude:2000m: Max Relative Humidity :0~95%</b>	

Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties.

Measurement accuracy could reach ±2mm in good conditions (good measurement surface, room temperature). If under adverse measuring conditions, such as the light is too strong, the temperature difference is too large, or the measured surface reflection is too weak, the deviation over distance will increase.

## **9. Measuring Conditions**

### **9-1 Measuring Range**

The range of this meter is limited to 30m, at night or dusk and if the target is in shadow, the measuring range without target plate is increased. Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties.

### **9-2 Target Surfaces**

Measuring errors can occur when measuring toward colorless liquids (e.g. water) or dust free glass, Styrofoam or semipermeable surfaces. Aiming at high gloss surfaces may deflect the laser beam and lead to measurement errors. For non-reflective and dark surfaces the measuring time may increase.

-if the equipment is used in a manner not specified by the manufacture, the warranty will be invalid

## **Care**

Do not immerse the instrument in water. Wipe off dirt with a damp, soft cloth. Do not use aggressive cleaning agents or solutions. Handle the instrument as you would a telescope or camera.

## **Warranty**

This instrument comes with a one-year warranty. If it is not used correctly via this manual, the warranty will be invalid.

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