

protech

Laser Distance Meter

TECHNICIAN



User Manual

QM1626

PLEASE READ THIS MANUAL BEFORE SWITCHING THE UNIT ON. IMPORTANT SAFETY INFORMATION INSIDE.

1. Safety Instructions

1.1. Permitted Use

- Measuring distances

1.2. Prohibited Use

- Using the instrument without reading these instructions
- Using outside the stated limits
- Deactivation of safety systems and removal of explanatory and hazard labels
- Opening of the equipment by using tools (screwdrivers, etc.), as far as not specifically permitted for certain cases
- Carrying out modification or conversion of the product
- Use of accessories from other manufacturers
- Deliberate or irresponsible behaviour on scaffolding, when using ladders, when measuring near machines which are running, or near parts of machines or installations which are unprotected
- Aiming directly into the sun
- Inadequate safeguards at the surveying site (e.g. when measuring on roads, construction sites, etc.)

1.3. Laser Classification

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

Laser Class 2 Products:

Do not stare into the laser beam or direct it towards other people unnecessarily.



⚠ 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.

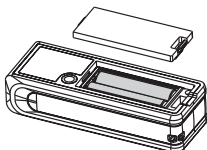
Precautions:

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 (See “Figure A”)

1. Remove battery compartment lid.
 2. Insert batteries, observing correct polarity.
 3. Close the battery compartment again.
- Replace the batteries when the symbol “” flashes permanently in the display.
 - Use alkaline batteries only.
 - Remove the batteries before any long period of non-use to avoid the danger of corrosion.



2.2. Keypad (See “Figure B”)

1. ON/MEAS Button

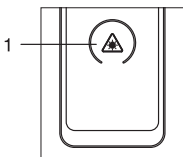


Figure B

2.3. LCD Display (See “Figure C”)

1. Laser Active
2. Reference Level (Rear)
3. Battery
4. Intermediate Line 1
5. Summary Line

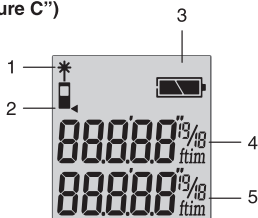


Figure C

3. Initial Operation & Setting

3.1. Switching On and Off

Switches on the instrument and laser.

Press and hold this button for 3 seconds to switch off the instrument. The instrument switches off automatically after three minutes of inactivity.

3.2. Reference Level Setting (See “Figure D”)

The default reference setting is from the rear of the instrument.

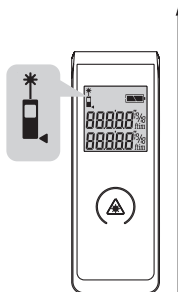


Figure D

3.3. Distance Unit Setting for Instrument

When switching on, press and hold this button longer until the screen displays m or ft-in unit icon.

The following units can be set:

	Distance
1	0.000m
2	0'00"1/16

4. Measuring

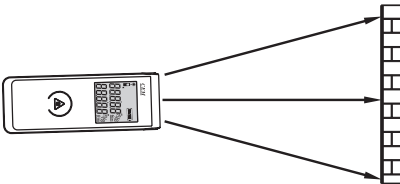
4.1. Single Distance Measurement

Press to activate the laser.

Press again to trigger the distance measurement. The measured value is displayed immediately.

4-2.Continuous Measurement (Tracking) & Min Measurement (See “Figure E”)

The continuous measurement function (tracking) is used for the transferring of measurements, e.g., from construction plans. In-continuous measurement mode, the measuring tool can be moved to the target, whereby the measured value is updated approx. every 0.5 seconds in the third line. The corresponding minimum value is displayed dynamically in the first line. As an example, the user can move from a wall to the required distance, while the actual distance can be read continuously. For continuous measurement, long press the MEAS button will start the continuous measurement. And press MEAS again to stop the function. The function is terminated automatically after continuous 100 times measurement. The MIN data will display in lines 1.



MIN

Figure E

5. Technical Data

Technical Specifications:

0.05 to 20m* (0.2 in to 66 ft*)

Measuring accuracy up to 10m (2°, standard deviation):

Typically: $\pm 1.5\text{mm}^{**}$ ($\pm 1/16\text{in}^{**}$)

Measuring Units: m, ft' in"

Laser Class: Class II

Laser Type: 650nm, <1mW

Smallest Unit Displayed: 1mm

Continuous Measurement
& Min Measurement: Yes

Display Illumination
and Two-Line Display : Yes

Tripod Thread: Yes

Beep Indication: Yes

Dust Protect/Splash Proof: IP54

Operating Temperature: 0°C to 40°C
(32°F to 104°F)

Storage Temperature: -10°C to 60°C
(14°F to 140°F)

Batteries: Type "AAA" 2*1.5V

Battery Life: Up to 4,000
measurements

Auto Laser Switch-Off: After 30 Seconds

Auto Instrument Switch-Off: After 3min

Dimensions: 37(W) x 100(H)
x 24(D)mm

Weight: 64g
(Excluding Batteries)

*Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties. 0m (33ft). In unfavourable variations, the deviation in favourable conditions (good target surface properties, room temperature) up to 1 conditions, such as intense sunshine, poorly reflecting target surface or high temperature over distances above 10m(33ft) can increase by $\pm 0.15\text{mm/m}$ ($\pm 0.0018\text{ in/ft}$).

6. Troubleshooting - Causes & Corrective Measures

Cause	Cause	Corrective Measure
208	Received signal too weak, measurement time too long. Distance out of range.	Use target plate
252	Temperature too high	Cool down instrument
253	Temperature too high	Cool down instrument
255	Hardware error	Switch ON/OFF the device several times, if the symbol still appears, please contact your dealer for assistance.

7. Measuring Conditions

7.1 Measuring Range

- The range is limited as per Technical Specifications.
- 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

7.2 Target Surfaces

- Measuring errors can occur when measuring toward colourless liquids (e.g. water) or dust free glass, styrofoam or similar semi-permeable surfaces
- Aiming at high gloss surfaces may deflect the laser beam and lead to measurement errors
- Against non-reflective and dark surfaces the measuring time may increase

7.3 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.

8. Labelling

