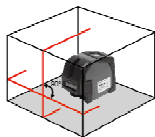
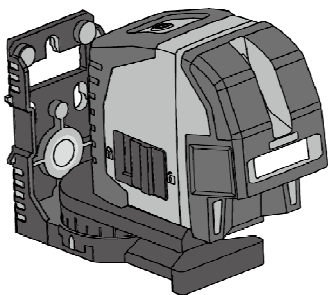




eV164P Cross Line Laser Level

User Manual



Cross Line Laser Level ennoLogic eV164P
Made in China
User Manual Version 1.1. Revised 3/5/2018
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<https://ennologic.com>

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1. Overview

Thank you for purchasing the ennoLogic eV164P cross line laser level. This laser level is a precision instrument designed for commercial and residential applications.

The eV164P laser level meets the requirements of professional construction and home improvement projects alike. It projects horizontal and vertical laser lines as well as plumb dots to assist you with any alignment or construction project where precise leveling is required. From hanging pictures and TVs, to mounting cabinet hardware, installing flooring, general wall and ceiling layouts, to aligning the handrails and balusters when building a staircase – the ennoLogic laser level can do it all.

Its green lasers are bright enough to be easily visible for all your outdoor projects. When building a deck, it'll help you set the deck at the correct height. Or use it to square and plumb a picket fence, and make sure your fence pickets are aligned.

The ennoLogic laser level features two green crossing laser beams (Class 2). The laser beams are self-leveling but can also be locked to project at any desired angle if needed. The level is accurate to $\pm 1/8$ inch at 50 feet.

In addition to the crossing lines, the laser also projects two plumb dots, one above and one below the level.

It also offers a full-time pulse mode that allows you to use the laser level in combination with a laser detector to achieve working distances of up to 165 feet.

The eV164P comes in a rugged IP54 housing and includes a magnetic pivot base for easy mounting on metal surfaces.

1.1 Important Notes, Safety Considerations and Disclaimer – Please Read



Please read these safety instructions and this user manual carefully before using this tool for the first time!

This tool is equipped with Class 2 infrared lasers. Use extreme caution when the lasers are on. Do not stare into the beams. Never point the laser beams at anyone's eyes, it can cause permanent damage to the eyes. Do not reflect the laser beams off a reflective surface and into someone's eyes. Do not allow children to use the tool as a toy.

Do not view the laser beams directly with optical instruments or set up the laser at eye level.

Do not use the tool in a flammable or explosive environment. Do not use this tool in areas where it is prohibited e.g. near airports and hospitals, or where it would be in violation of the law.

Do not open the tool other than for the purpose of replacing batteries. Do not disassemble the laser tool. There are no user serviceable parts inside.

Do not modify the laser in any way. Modifying the tool may result in hazardous laser radiation exposure.

Do not operate the laser around children or allow children to operate the laser. Serious eye injury may result.

An exposure to the beam of a Class 2 laser is considered safe for a maximum of 0.25 seconds. Eyelid reflexes will normally provide adequate protection.

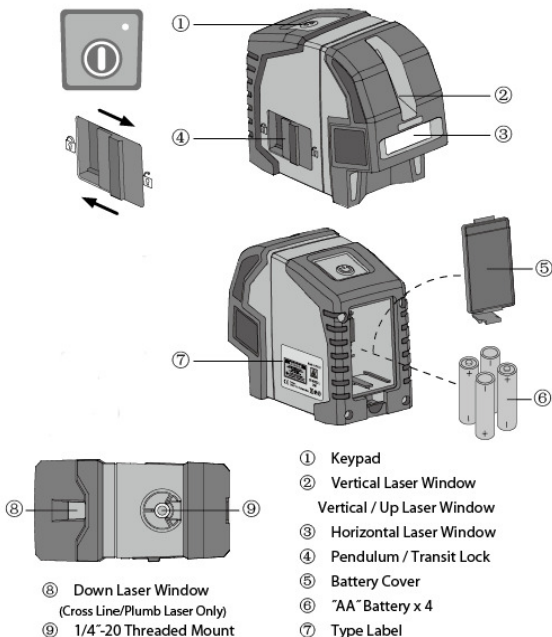
Store the laser level in a cool and dry location and do not expose it to high temperatures and humidity. Remove the batteries if the laser level will be out of use for an extended period. Do not clean the tool with corrosive or caustic cleaners. Treat the lasers and focusing lenses as you would the optical lens of a camera.



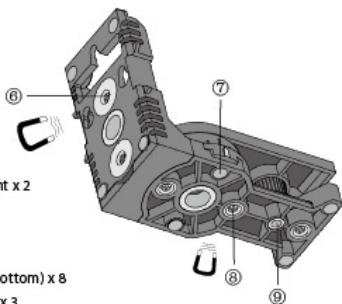
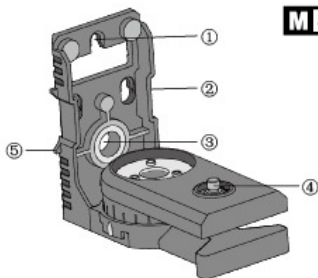
IEC/EN 60825-1:2007

Laser Warning Label

1.2 Product Overview

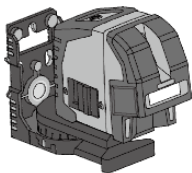


M agnetic Pivoting Base



- ① Keyhole Clip
- ② Strapping Feature
- ③ 5/8" -11 Threaded Mount x 2
- ④ 1/4" -20 Thread
- ⑤ Travel Stopper
- ⑥ Back Magnet (Big) x 2
- ⑦ Rubber Pad (Back and Bottom) x 8
- ⑧ Bottom Magnet (Small) x 3
- ⑨ 1/4" -20 Threaded Mount

1.3 Operating Modes & LED Indications



- LED Indication - Green



- Laser Beam Blinking



- Full Time Pulse

Self-leveling Mode



- Pendulum Unlocked



- Self-leveling Operations



- Tool Tilted $< 4^\circ \pm 1^\circ$

Manual Mode



- Pendulum Locked



- Non-self-leveling Operations



- Manual Mode

General Notes:

- Press to turn laser tool ON; Press and hold for 2 seconds to turn laser tool OFF while in any mode.
- Press repeatedly to cycle through the available modes.

Self-leveling Mode

- is enabled when the laser tool is switched to the unlocked position.
- has laser beam(s) blink fast at 2 Hz when tool is out of self-leveling range.
- allows proper use of tool's full time pulse mode with laser detector.

Manual Mode

- is enabled when the pendulum lock is in its locked position to position the laser tool at various angles to project non-level straight lines or points.
- disables self-leveling operations. Accuracy of the beam(s) is not guaranteed to be level, and laser beam(s) will blink about every 5 seconds.

LED Indication

- is solid Green, and it blinks only when battery level is low.

1.4 How to Use Your Cross Line Laser Level

Level / Point Transfer

- Establish a horizontal reference plane by using the horizontal laser beam.
- Position the desired object(s) until they are aligned with the horizontal reference plane to make sure that the object(s) are level.

Plumb / Point Transfer

- Establish a vertical reference plane by using the vertical beam.
- Position the desired object(s) until they are aligned with the vertical reference plane to make sure that the object(s) are plumb.
- Establish 2 reference points which need to be plumb.
- Align either the up or the down plumb beam to a set reference point.

- Position the desired object until the laser beam is aligned with the second reference point which needs to be plumb with the set reference point.

Square

- Establish a point where the 2 beams cross by using the vertical and horizontal laser beams.
- Position the desired object(s) until they are aligned with both the vertical and horizontal laser beams to make sure that the object(s) are square.

Full Time Pulse Mode

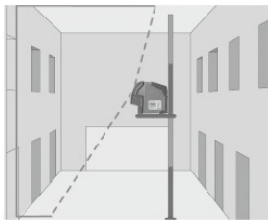
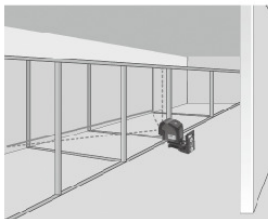
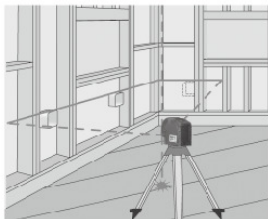
- The full time pulse mode of the laser level in self-leveling mode allows you to use it with a laser detector in brighter environments or at greater working distances.

Manual Mode

- Disables self-leveling and allows the laser tool to project laser beams in any orientation.

Applications for reference

 - Pendulum Unlocked  - Self-leveling Operations  - Full Time Pulse



Applications for reference



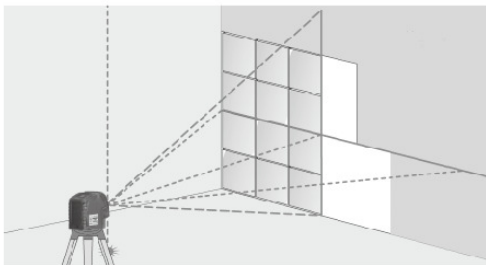
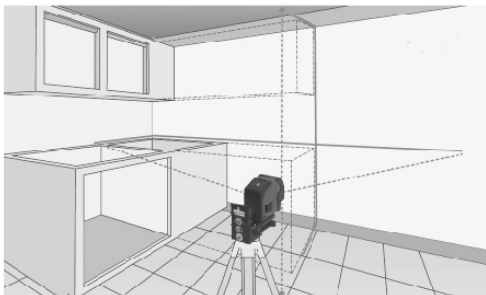
- Pendulum Unlocked



- Self-leveling Operations



- Full Time Pulse



SPECIFICATIONS

Technical Specifications

Laser Class	Class 2 (IEC/EN60825-1/2007)
Laser Wavelength	635 ± 5nm
Leveling Accuracy	1/8 in. at 50 feet (±3mm at 15m)
Horizontal/Vertical Accuracy	1/8 in. at 50 feet (±3mm at 15m)
Leveling/Compensation Range	4°±1°
Working Distance (Line)	65 feet (20m)
Working Distance (Line with Detector)	165 feet (50m)
Power	4x AA Batteries
Battery Lifetime	20 Hours
IP Rating	IP54
Operating Temperature	14°F to 122°F (-10°C to 50°C)
Storage Temperature	-4°F to 158°F (-20°C to 70°C)
Size	5.5 x 5.3 x 2.25 in. (140 x 135 x 57 mm)
Weight (incl. batteries)	25.5oz. (725g)

Maintenance

- This tool is sealed and pre-calibrated to the specified accuracy.
- We recommend performing an accuracy check before first use and periodic checks thereafter, especially for precise layouts.
- When not in use, please power the tool off and place the pendulum lock in its locked position.
- In Manual Mode, self-leveling is disabled.
- Do not short the battery terminals.
- Do not mix old and new batteries. Replace all 4 AA batteries at the same time with 4 new batteries of the same brand and type.
- Do not store the laser tool in direct sunlight or expose it to high temperatures. Plastic parts may become deformed at high temperatures.
- Clean exterior plastic parts with a damp cloth. Although these parts are solvent resistant, NEVER use solvents. Use a soft, dry cloth to remove moisture before storage.
- Store the tool in its case when not in use.
- Remove the batteries before long-term storage.
- Do not dispose of this product with household waste.
- Always dispose of batteries according to local regulations.
- Please recycle all electronics at your local electronics recycling center.

ennoLogic.com
PO Box 25207
Eugene, OR 97402

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