ENGLISH

93RLS

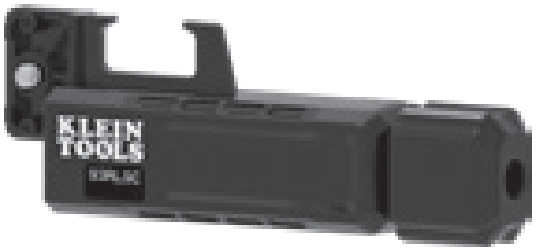
INSTRUCTION MANUAL

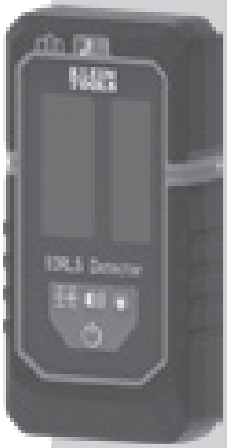
Green Rotary Laser Level

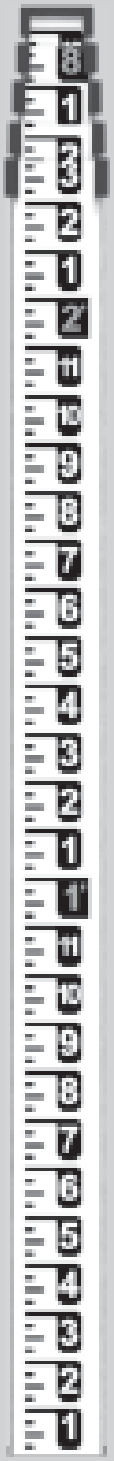
- 1,150' (350m) RANGE (WITH DETECTOR)

IP66









CE

ENGLISH

Klein Tools 93RLS is a self-leveling laser with an operating range of 1150' (350 m) (with detector), designed for all leveling projects. Also comes with a plumb laser line.

ROTARY LASER LEVEL:

- **Operating Altitude:** 6562' (2000m)
- **Relative Humidity:** <80% non-condensing
- **Operating Temp:** 20°F to 120°F (-10°C to 50°C)
- **Storage Temp:** -5°F to 140°F (-20°C to 60°C)
- **Lasers:** 510-530 nm , ≤ 5 mW Class 3R, tp ≤ 250ms
- **Range:** 1150' (350 m)with detector
- **Accuracy:** +/- 1 mm per 10 m
- **Battery Type:** Internal Li-Ion, 3.6V 10000 mAH (36.00Wh)
- **Battery Life:** 30 Hours
- **Charging Requirements:** Max 5V DC, Max 2.0 A
- **Dimensions:** 31.93" × 15.88" × 8.57" (81 × 40 × 22cm)
- **Weight:** 76oz. (2.1 kg)
- **Calibration:** Calibrated for accuracy at factory
- **Standards:** EN61326-1:2013, IEC60825-1:2014, CE, UKCA, ROHS, REACH, DOE/CEC, NRCan.
  Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
- **Drop Protection:** 3.2' (1 m)
- **Ingress Protection:** IP66 Dust & Water Resistant

DETECTOR:

- **Operating Altitude:** 6562' (2000m)
- **Relative Humidity:** <80% non-condensing
- **Operating Temp:** 20°F to 120°F (-10°C to 50°C)
- **Storage Temp:** -5°F to 140°F (-20°C to 60°C)
- **Battery Type:** 2× AA Alkaline
- **Dimensions:** 5.62" × 2.78" × 1.1" (143 × 71 × 28mm)
- **Weight:** 6.24 oz. (177 g)
- **Drop Protection:** 3.2' (1 m)
- **Ingress Protection:** IP54

Specifications subject to change.

FCC AND IC COMPLIANCE

. Canada ICES-003 (B) / NMB-003 (B)

⚠ WARNINGS

To ensure safe operation and service of the instrument, follow these instructions. Failure to observe these warnings can result in serious personal injury, fire, or electrical shock. Retain these instructions for future reference.

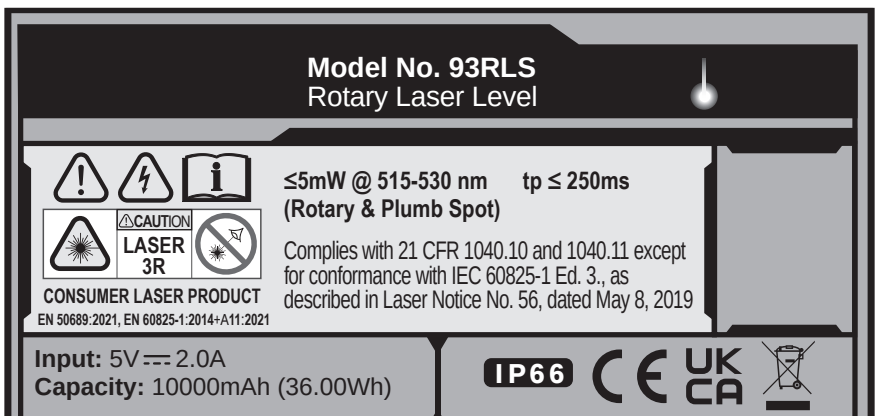
⚠ ***WARNING: LASER RADIATION. DO NOT STARE INTO BEAM. Class 3R Laser.***

Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

- Exposing eyes to laser radiation can result in severe and permanent eye injuries. **NEVER** look directly into the laser beam emitted by this instrument.
- Do not use the instrument if it appears to be damaged.
- Do not modify the instrument in any way, as to do so could result in emission of hazardous laser radiation than could result in severe eye injuries.
- Do not use optical equipment such as lenses, prisms, optical scopes, etc. to transmit, retransmit, or view the laser beam as this could result in severe eye injuries.
- This product should not be used by untrained operators or operators who have not read and fully understood the instructions.
- This product should not be used in any location that could result in somebody looking at or having their eyes inadvertently irradiated by the laser beam as this could result in severe eye injuries.
- The instrument should be powered off following use to minimize the risks of inadvertently exposure to hazardous laser radiation that could result in severe eye injuries.
- Do not remove warning labels from this instrument as this could result in serious personal injury and increases the risk of exposure to hazardous laser irradiation.
- The instrument should be securely located in a tidy work environment prior to operation as unexpected drops or movement of the instrument may result in damage to the instrument and increases the risk of inadvertent exposure to laser radiation that could result in severe eye injuries.
- DO NOT immerse in water or other liquids.
- Properly seal the charging port cover to achieve specified water & foreign object ingress protection. Keep seal free of dirt, oil, sand, or other material that interferes with proper sealing. Failure to do so can result in risk of fire or electric shock.
- DO NOT open the charging port cover if wet or in a wet environment. Thoroughly dry the unit and the seal around water-resistant cover completely before opening water resistant cover.
- Risk of fire and burns. DO NOT open, crush, heat above specified maximum temperature or incinerate. Prolonged exposure to direct sunlight can result in elevated temperatures.
- DO NOT attempt to repair the product or charging cable. There are no user-serviceable parts.

Warning labels on product

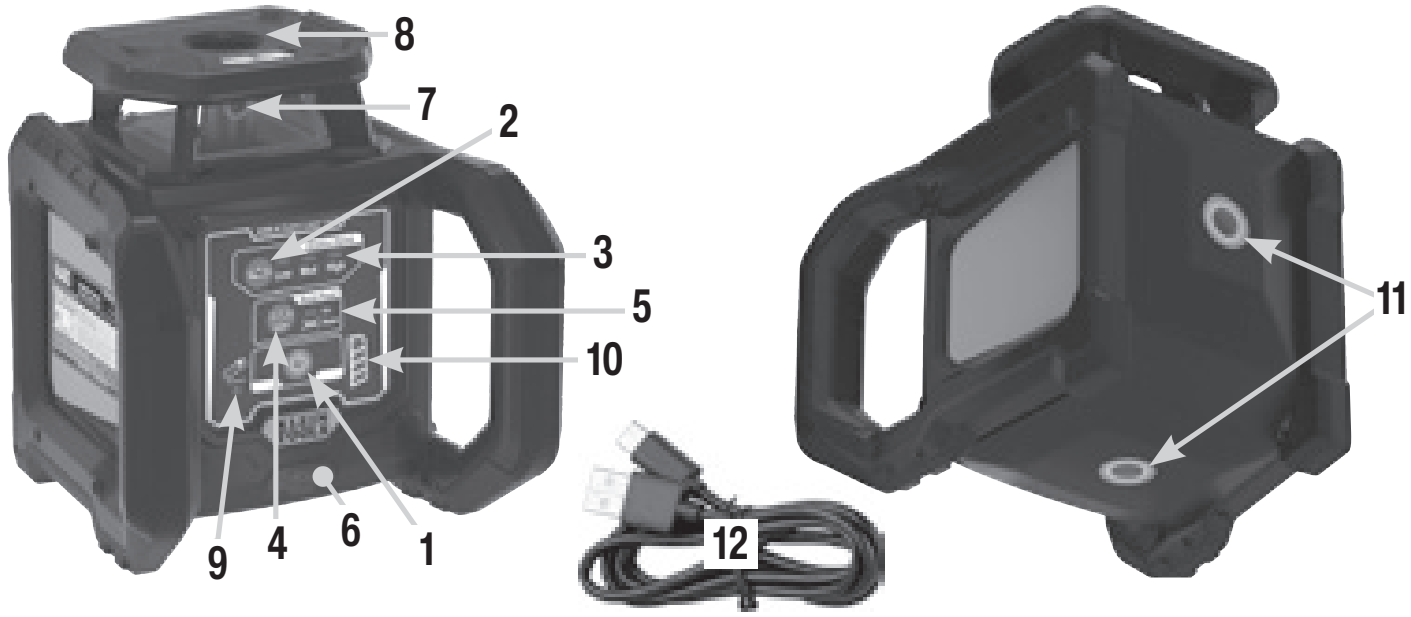




SYMBOLS ON INSTRUMENT - LEVEL (93RLS)

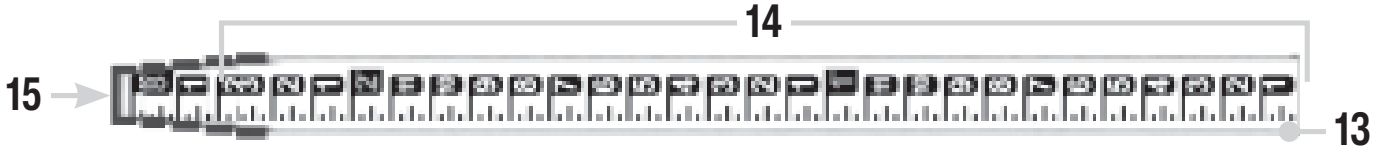
Rotation Speed	Out-Of-Level Indicator	IP66 Ingress Protection IP66 Rating - Dust & Water Resistant
Bump Reset	Hazardous laser radiation	Laser Aperture
Warning or Caution	Warning – Risk of electric shock	Read instructions
LASER 3R Laser Class 3R	Avoid direct eye exposure	WEEE – Electronics disposal
CE Conformité Européenne: Conforms with European Economic Area directives		

FEATURE DETAILS - LEVEL (93RLS)



1 Power On/Off Button
2 Rotation Speed Button
3 Rotation Speed Indicators
4 "Bump Reset" Button
5 Bump Reset Mode Indicators
6 USB-C Charge-In Port
7 Rotary Plane Aperture
8 Plumb Spot Aperture
9 Level Indicator
10 Battery Charge Indicator LEDs
11 5/8-11 Tripod Mounts
12 USB-C Charging Cable

FEATURE DETAILS - GRADING ROD (93RLSGR)

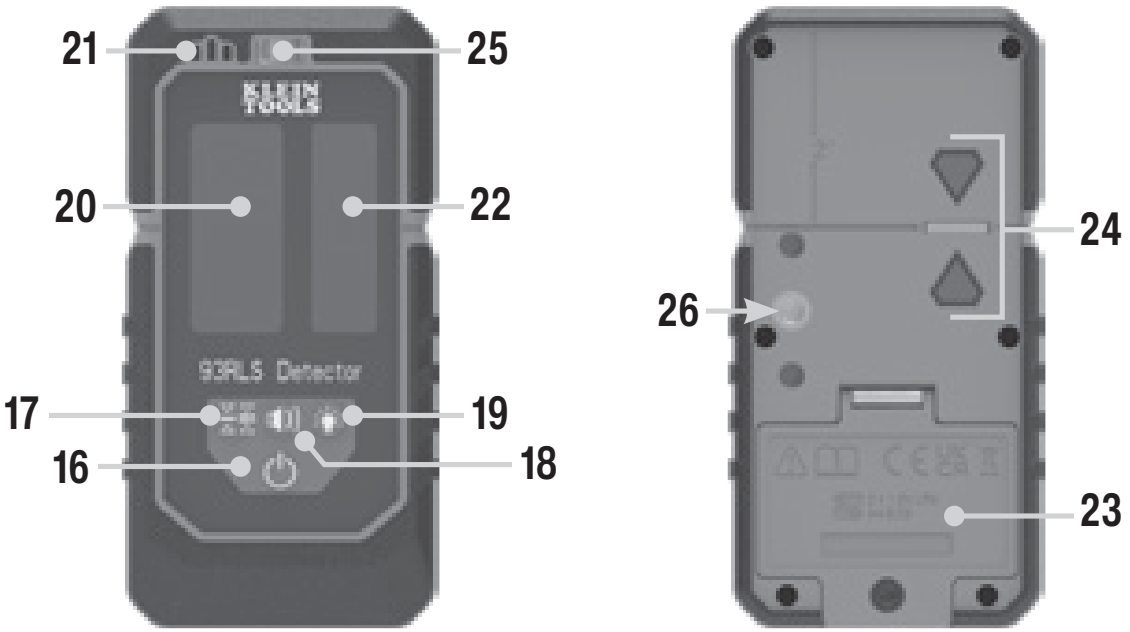


13 Rail
14 Measurement Scales
15 Spring-Loaded Button

SYMBOLS ON INSTRUMENT - DETECTOR (93RLSD)

Warning or Caution	Read instructions	WEEE – Electronics disposal
Conformité Européenne: Conforms with European Economic Area directives		

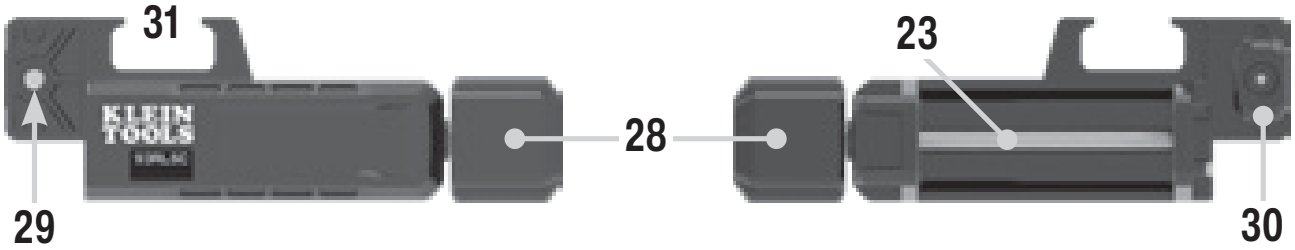
FEATURE DETAILS - DETECTOR (93RLSD)



NOTE: No user-serviceable parts inside.

16 Power On/Off Button
17 Accuracy Button
18 Volume Button
19 Backlight Button
20 Display
21 Speaker
22 Laser Detector Photocell
23 Battery Cover
24 Notification LEDs
25 Bubble Level
26 1/4-20 Tripod/93RLSC Clamp Mount

FEATURE DETAILS - DETECTOR CLAMP (93RLSDC)



27 Clamp Drive Screw
28 Clamp Knob
29 1/4-20 Mounting Screw
30 Mounting Screw Knob
31 Grade Position Indicator

1.888.610.7664 www.calcert.com sales@calcert.com

OPERATING INSTRUCTIONS

LASER LEVEL UNIT

Power On/Off: Press and hold the Power On/Off Button (1) for 3 seconds to power on the unit. The Battery Charge Indicator LEDs (10) will count up when the unit is active and the unit will begin self-leveling. The laser can self-level on surfaces of up to 5° in pitch. Allow up to 20 seconds for the 93RLS to self-level. Once self-leveled, it will start spinning at the last selected rotation speed.

Press and hold the Power On/Off Button (1) for 3 seconds to power off the unit.

Auto-Power Off: The 93RLS will automatically power off under the following conditions:

- After 8 hours of inactivity.
- After 10 minutes of not finding level.
- 10 minutes after displaying an error code (see TROUBLESHOOTING section).

Level Indicator: The Level Indicator (9) will indicate the following:

- While the unit is in use and level, the Level Indicator (9) will illuminate solid.
- While the unit is attempting to self-level, the Level Indicator (9) will blink rapidly until level is found.
- If the surface the unit is on is pitched more than 5°, the Level Indicator (9) will blink slowly, indicating the unit cannot self-level. Move unit to a more level surface.

Rotation Speed: Press the Rotation Speed button (2) to toggle through Low, Medium, and High speed rotation. The appropriate Rotation Speed Indicator (3) will illuminate to indicate the selected speed.

Bump Reset Mode: Press the Bump Reset Button (4) to turn Bump Reset mode on or off. When on, If the unit is bumped or moved the laser will stop rotating, notifying the user that it has been moved. To reset the unit, press the Bump Reset Button (4).

DETECTOR

Power On/Off: Press the Power On/Off Button (16).

Accuracy: Press the Accuracy Button (17) to toggle between low and high settings:

- The low setting is accurate up to ±0.039" (±1mm). This setting is recommended for measuring distances less than 65' (20m).
- The high setting is accurate up to ±0.118" (±3mm). This setting is recommended for measuring distances greater than 65' (20m).

Volume: Press the Volume Button (18) repeatedly to toggle through the volume settings, from low, to high, to mute.

Backlight: Press the Backlight Button (19) to turn the backlight on or off.

OPERATING INSTRUCTIONS

USING LASER LEVEL WITH DETECTOR

Mount the Laser Detector to the Grade Rod with the Detector Clamp (93RLSDC):

1. Attach the 1/4-20 Mount (26) on the Laser Detector to the 1/4-20 Mounting Screw (29) on the Detector Clamp and tighten using the Mounting Screw Knob (30) located at the rear of the Detector Clamp (FIG. 1).
2. Secure the Detector Clamp to the Grade Rod using the Clamp Knob (28) (FIG. 2).
3. To adjust height, loosen the Clamp Knob (28) on the Detector Clamp, reposition the Detector as needed, then tighten the Clamp Knob (28) (FIG. 2).

The Grade Rod is marked with measurement scales (14) on both sides and consists of five telescoping sections. A spring-loaded button (15) activates a lock mechanism to maintain the grade rod at various lengths to maximum height of 9' (2.7 m).

With the laser on and the Detector mounted to the Grade Rod, position the Detector so that the front of the Detector is facing the laser. Position the Laser Detector Photocell (22) facing the laser beam produced by the Rotary Laser. Adjust the Detector in the direction indicated by the arrows on the front and back of the detector. An audible beep will sound when the laser hits the Laser Detector Photocell (22). Beeping will increase in speed as the Detector gets closer to being centrally aligned. When the Detector is centrally aligned with the laser, the beeping will cease and a steady tone will be generated, and the center light between the arrows will illuminate. The bubble vial located on the top of the Detector will ensure the Grade Rod is upright and ensure the most accurate readings.

FIG. 1

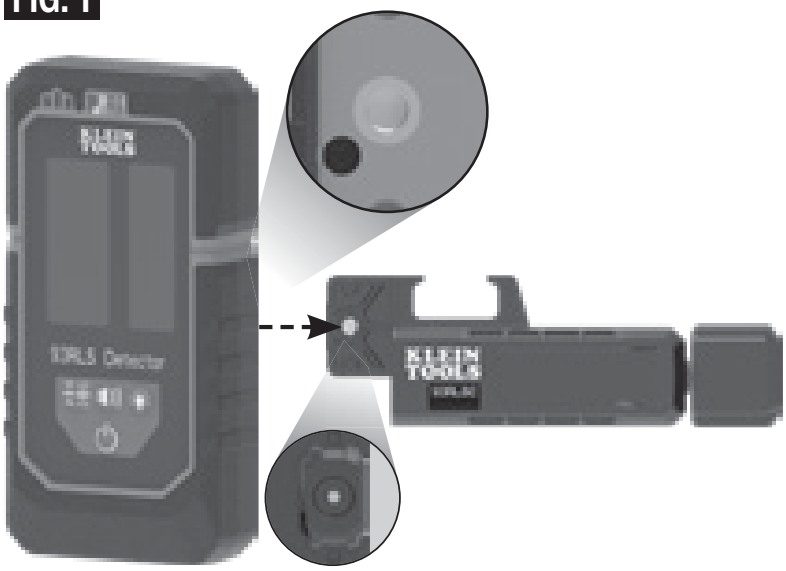
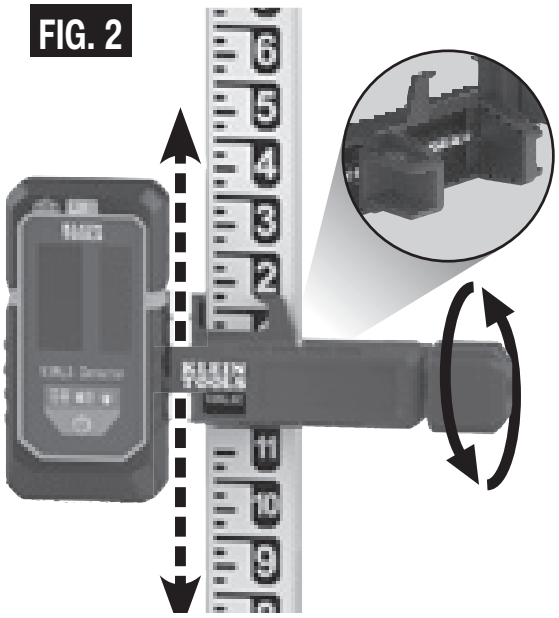


FIG. 2



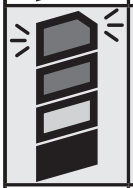
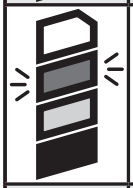
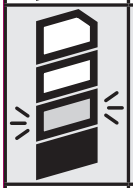
OPERATING INSTRUCTIONS

RECHARGING BATTERY

When the Red LED on the Battery Level Indicator blinks, the battery needs to be recharged:

1. Connect supplied charging cable's (12) USB-C connection to the USB-C port (6) of the 93RLS.
2. Connect the charging cable's USB-A port to a charging source (5V DC, Min 2.0A, not included).
3. The Battery Level Indicator (10) will illuminate to indicate charging status (TABLE 1).
4. A full charge can take up to 8.5 hours, depending on the charger's output. Charge completely before using.

TABLE 1

LED	Status	% Charged
	Solid green Solid green Solid yellow Solid red	100% charged
	Blinking green Solid green Solid yellow Solid red	75% to 99% charged
	Not Illuminated Blinking green Solid yellow Solid red	50% to 74% charged
	Not Illuminated Not Illuminated Blinking yellow Solid red	25% to 49% charged
	Not Illuminated Not Illuminated Not Illuminated Blinking red	0% to 24% charged

MAINTENANCE

- Regularly inspect ports and charging cable for and debris, dirt, damage, and corrosion.
- DO NOT attempt to repair unit or cable; replace as needed.

CLEANING

Be sure instrument is turned off and disconnected from all power sources. Wipe with a clean, dry lint-free cloth. ***Do not use abrasive cleaners or solvents.***

RECHARGING

Recharge as needed. There are no pre-designated intervals at which to recharge as long as you are using the unit regularly. Avoid discharging completely on a regular basis, as this can impact overall life.

STORAGE

If storing for more than one month, charge completely before storage, and recharge approximately every three months to avoid full discharge. Store in cool temperatures, mild humidity, and away from direct sunlight (See GENERAL SPECIFICATIONS section).

Leaving in a vehicle or other confined spaces in extreme hot temperatures can lead to decrease in service life, overheating, or fire. Extreme cold temperatures below the specified storage range can also harm performance and service life. Keep away from corrosive chemicals and gases.

After taking out of storage, inspect visually to make sure unit and all accessories look satisfactory. Allow unit to return to ambient conditions before recharging.



Do not place equipment and its accessories in the trash. Items must be properly disposed of in accordance with local regulations. See **www.epa.gov/recycle** for additional information.

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