

Level Sensor LS-80A/B/G

Thank you for purchasing the TOPCON Level Sensor LS-80A/B/G. For the best performance of the instruments, please read these instructions carefully and keep them in a convenient location for future reference.

HANDLING PRECAUTIONS

Guarding the instrument against shock

When transporting the instrument, provide some protection to minimize risk of shock. Heavy shock may affect beam accuracy.

DISPLAY FOR SAFE USE

In order to encourage the safe use of products and prevent any danger to the operator and others or damage to properties, important warnings are put on the products and inserted in the instruction manuals.

We suggest that everyone understand the meaning of the following displays and icons before reading the "Safety Cautions" and text.

Display	Meaning
WARNING	Ignoring or disregard of this display may lead to death or serious injury.
CAUTION	Ignoring or disregard of this display may lead to personal injury or physical damage to the instrument.

- Injury refers to hurt, burn, electric shock, etc.
- Physical damage refers to extensive damage to buildings or equipment and furniture.

SAFETY CAUTIONS

WARNING

- There is a risk of fire, electric shock or physical harm if you attempt to disassemble or repair the instrument yourself. This is only to be carried out by TOPCON or an authorized dealer, only!
- Risk of fire or electric shock. Do not use a wet battery or charger.
- Battery can cause explosion or injury. Do not dispose in fire or heat.
- The short circuit of a battery can cause a fire. Do not short circuit battery when storing it.

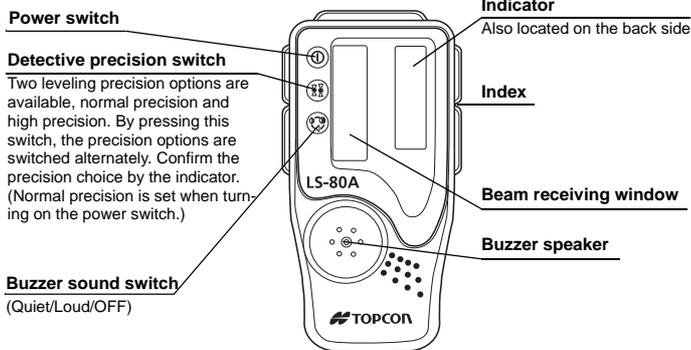
CAUTION

- Do not allow skin or clothing to come into contact with acid from the batteries, if this does occur then wash off with copious amounts of water and seek medical advice.

EXCEPTIONS FROM RESPONSIBILITY

- The user of this product is expected to follow all operating instructions and make periodic checks of the product's performance.
- The manufacturer, or its representatives, assumes no responsibility for results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits.
- The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster, (an earthquake, storms, floods etc.). A fire, accident, or an act of a third party and/or a usage any other usual conditions.
- The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data, an interruption of business etc., caused by using the product or an unusable product.
- The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage except for explained in the user manual.
- The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement, or action due to connecting with other products.

NOMENCLATURE



DISPLAY

Height alert warning of rotating laser*1 (Except for LS-80G)
A flash and a buzzer sound signifies that the height alert function of rotating laser is operating. Level sensor can detect the signal of height alert warning of the rotating laser. (This function is not usable to the rotating laser which does not have the height alert and the function to output alarm signal.)

Rotating laser battery warning*2 (Except for LS-80G)
A flash shows that the rotating laser power is low. The level sensor can detect the rotating laser battery warning. (This function is not usable to the rotating laser which does not have the function to output alarm signal.)

High precision mode
Normal precision mode

Higher than datum position
(Buzzer sound: High frequent beep sound)
Move the sensor downward.

Datum position
(Buzzer sound: Continuous beep sound)

Lower than datum position
(Buzzer sound: Low frequent beep sound)
Move the sensor upward.

Battery remaining display
Indicates the battery remaining of level sensor as follows.

Battery is sufficient.
The power is low, but laser is still usable.
Flashing alternately
Dead battery. Replace the dry battery with new one.

Note: The warning displays *1 and *2 are the functions that the level sensor detects alarm signal from the rotating laser. The level sensor can be canceled the alarm detection from the rotating laser. To be canceled the detection; Press the power switch while pressing the buzzer sound switch when powering on.

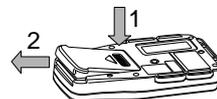
AUTO-CUT OFF FUNCTION

The power will be turned off automatically after detecting no laser beam for more than approx. 30 minutes. (To turn on the level sensor, press the power switch again.)

*1, *2 For more information about the warning displays of above *1 and *2, refer to instruction manual of each rotating laser.

REPLACING BATTERY

- Keep pushing the battery cover in 1 direction, and then try to slide the cover in 2 direction. The cover does not move but it will be open.
- Take out the battery and place a new one into the battery box.
- Press the lid down and click to close.



DETECTIVE RANGE

Display	Precision	
	80A/80G	80B
	High ±1mm (2mm width)	
	Normal ±2mm (4mm width)	
	±5mm (10mm width)	—
	±10mm (20mm width)	—
	±15mm (30mm width)	—
	more than ±5mm (more than 30mm width)	more than ±5mm (more than 10mm width)
	Level sensor is moved upward or downward from laser beam. (*LS-80B: Blinking)	

EXAMPLE OPERATIONAL



SPECIFICATIONS

Detective range
50mm (2.0 in)

Detective precision
High precision : ±1mm (±0.04 in)
Normal precision : ±2mm (±0.08 in)

Detective beam indication
Liquid crystal : Both sides (LS-80A/G)
Front side only (LS-80B)

Buzzer (LS-80A/B/G)

Power source
2xAA size dry cell batteries
*Batteries included in the package are to confirm the initial operation. Please replace the batteries provided with new batteries as soon as possible.

Voltage
DC 3V

The time for auto-cut off
Approx. 30 min.

Waterproof property / dust resistance
JIS protection grade IP66

Operating temperature
-20°C to 50°C (-4°F to +122°F)

Continuous operating time
Alkaline manganese dry batteries
Approx. 120hours

Dimensions
146 (l) × 76 (w) × 26 (h) mm
(5.7 (l) × 2.9 (w) × 1.0 (h) in)

Weight
0.19 kg (0.41 lbs)
(including dry batteries)

About measuring range, refer to instruction manual of each rotating laser.



EMC NOTICE
In industrial locations or in proximity to industrial power installations, this instrument might be affected by electromagnetic noise. Under such conditions, please test the instrument performance before use.

