

BD5A

EN

OPERATING MANUAL
CROSS LINE LASER



 **TROTEC**

Table of contents

Notes regarding the operating manual..... 2

Safety 2

Information about the device..... 4

Transport and storage..... 5

Operation 5


Maintenance and repair 8


Errors and faults..... 8


Disposal 9


Notes regarding the operating manual

Symbols


 **Warning of electrical voltage**
This symbol indicates dangers to the life and health of persons due to electrical voltage.


 **Warning of laser radiation**
This symbol indicates dangers to the health of persons due to laser radiation.

 **Warning**
This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.

 **Caution**
This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Note
This signal word indicates important information (e.g. material damage), but does not indicate hazards.

 **Info**
Information marked with this symbol helps you to carry out your tasks quickly and safely.

 **Follow the manual**
Information marked with this symbol indicates that the operating manual must be observed.

You can download the current version of the operating manual and the EU declaration of conformity via the following link:



BD5A

Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use!



Warning

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and / or serious injury. **Save all warnings and instructions for future reference.**

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

- Do not use the device in potentially explosive rooms.
- Do not use the device in aggressive atmosphere.
- Do not immerse the device in water. Do not allow liquids to penetrate into the device.
- The device may only be used in dry surroundings and must not be used in the rain or at a relative humidity exceeding the operating conditions.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not open the device with a tool.
- Avoid looking directly into the laser beam.
- Never point the laser beam at people or animals.
- Only use the device if sufficient safety precautions were taken at the surveyed location (e.g. when performing measurements along public roads, on building sites etc.). Otherwise do not use the device.

- Observe the storage and operating conditions as given in the Technical data chapter.

Intended use

Only use the device BD5A for the projection on non-reflective surfaces as an aid to determine and check horizontal, vertical and / or parallel lines. Observe and comply with the technical data.

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

Improper use

Do not use the device BD5A in potentially explosive atmospheres or in liquids. Never point it at people or animals. Trotec accepts no liability for damages resulting from improper use. In such a case, any warranty claims will be voided.

Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Personnel qualifications

People who use this device must:

- be aware of the dangers that occur when working with laser measuring devices.
- have read and understood the operating manual, especially the Safety chapter.

Residual risks



Warning of laser radiation



**Laser class 2, P max.: < 1 mW, λ: 650 nm,
EN 60825-1:2014**

Do not look directly into the laser beam or the opening from which it emerges.

Never point the laser beam at people, animals or reflective surfaces. Even brief eye contact can lead to eye damage.

Examining the laser output aperture by use of optical instruments (e.g. magnifying glass, magnifiers and the like) entails the risk of eye damage.

When working with a laser of class 2, observe the national regulations on wearing eye protection.



Warning

Risk of suffocation!

Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



Caution

Keep a sufficient distance from heat sources.

Note

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

Note

Do not use abrasive cleaners or solvents to clean the device.

Information about the device

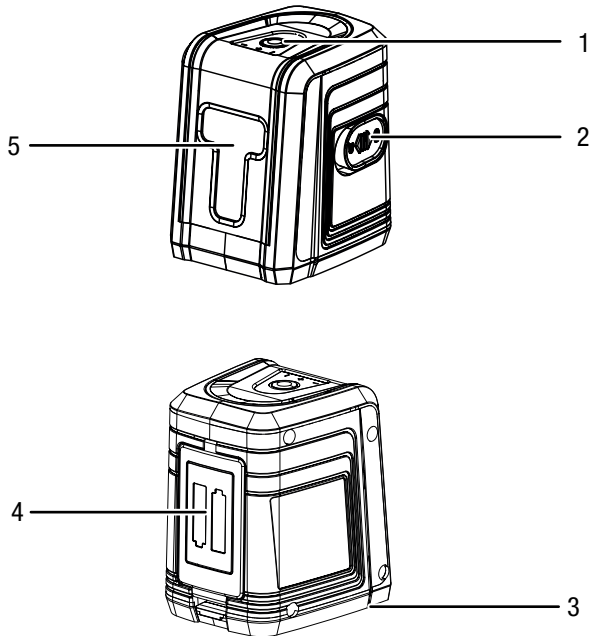
Device description

The cross line laser BD5A projects laser lines on surfaces, e.g. to drill holes in a straight line – similar to using a spirit level.

The device comes with the following features:

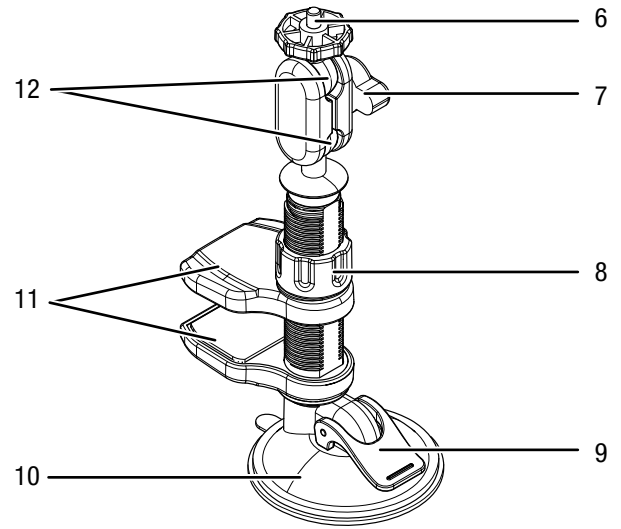
- Projects light-intense laser lines up to a distance of 10 m
- Self-levelling up to an inclination of 4°
- Laser projection either as cross lines or as individual horizontal or vertical line
- Battery-operated
- Integrated ¼ inch tripod connection

Device depiction



No.	Designation
1	ON / OFF / operating mode button
2	ON / OFF / lock switch
3	1/4 inch tripod connection (bottom)
4	Battery compartment with cover
5	Laser outlet opening

Multifunctional mount



No.	Designation
6	Screw (for tripod connection)
7	Wing nut (for ball joints)
8	Locking screw (for retainer with jaws)
9	Lever (for suction cup)
10	Suction cup
11	Retainer with jaws
12	Ball joint

Technical data

Parameter	Value
Model:	BD5A
Weight:	275 g
Dimensions (length x width x height):	83 x 60 x 72 mm
Accuracy – laser:	at 0°: ±0.8 mm/m at ≤4°: ±1 mm/m
Range:	10 m
Operating temperature:	-20 °C to 50 °C
Storage temperature:	-20 °C to 50 °C
Laser output:	< 1 mW (650 nm)
Laser class:	2
Power supply:	2 x Alkaline AA, 1.5 V batteries

Scope of delivery

- 1 x Cross line laser BD5A
- 2 x Alkaline AA, 1.5 V batteries
- 1 x Multifunctional mount
- 1 x Quick guide

Transport and storage

Note

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

Transport

For transporting the device use a suitable bag to protect it from external influences.

Storage

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- protected from dust and direct sunlight
- with a cover to protect it from invasive dust if necessary
- The storage temperature is the same as the range given in the Technical data chapter.
- Remove the batteries from the device.

Operation

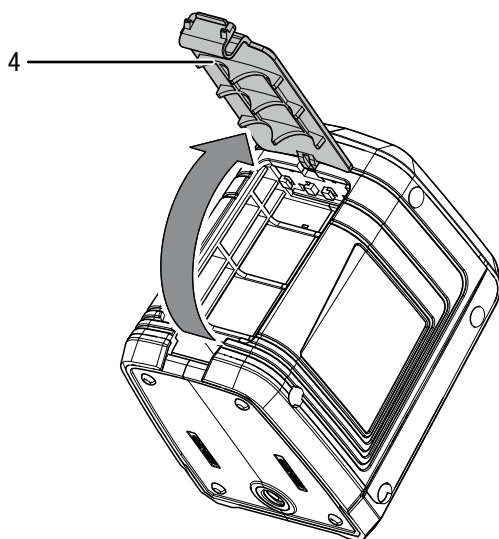
Inserting the batteries

Insert the supplied batteries into the device before first use.

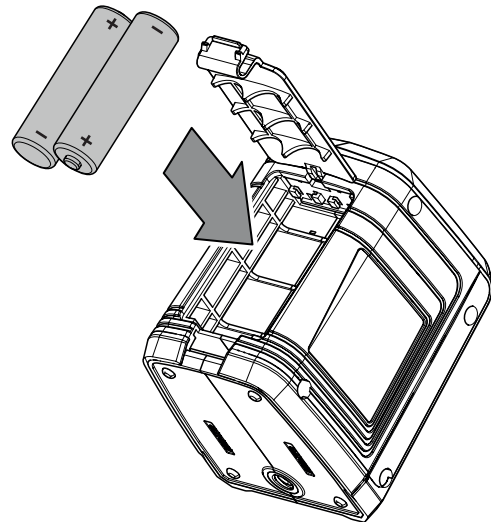
Note

Make sure that the surface of the device is dry and the device is switched off.

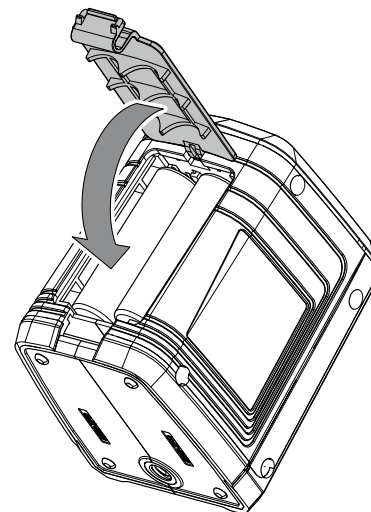
1. Open the cover (4) of the battery compartment.



2. If applicable, remove the old batteries.
3. Insert the new batteries in the battery compartment with correct polarity.



4. Then close the cover of the battery compartment (4) again.



Switching the device on



Warning of laser radiation

Laser class 2, P max.: < 1 mW, λ: 650 nm, EN 60825-1:2014



Do not look directly into the laser beam or the opening from which it emerges.


Never point the laser beam at people, animals or reflective surfaces. Even brief eye contact can lead to eye damage.

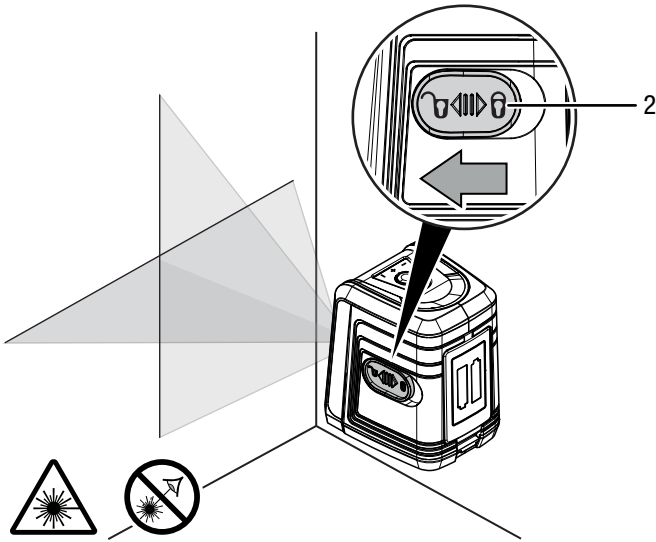
Examining the laser output aperture by use of optical instruments (e.g. magnifying glass, magnifiers and the like) entails the risk of eye damage.

When working with a laser of class 2, observe the national regulations on wearing eye protection.

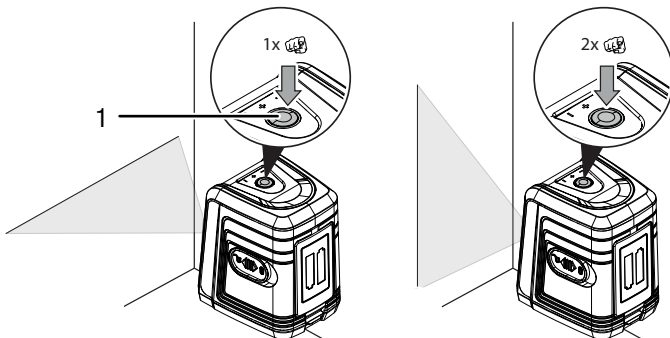
The device has 2 different modes of operation. On the one hand, you can use the device with the automatic self-levelling function, on the other, it is possible to set the laser to a fix position.


Self-levelling function of the laser

- Slide the on/off switch (2) to  to switch the device on.




- ⇒ Both the vertical and the horizontal laser switch on.
 - ⇒ The operating mode button (1) is illuminated in green.
 - ⇒ If the operating mode button (1) is illuminated in red and the laser flashes, the permissible inclination range of 4° is exceeded. Position the device horizontally.
- By means of the operating mode button (1) you can select whether both lasers are to be activated or only either the horizontal or the vertical laser.



- When positioning the device as desired, the self-levelling function of the lasers commences automatically.
 - ⇒ When exceeding the permissible inclination range of 4°, the lasers begin to flash and the operating mode button (1) will be illuminated in red. If so, self-levelling will not function properly. Position the device horizontally.
- Slide the on/off switch (2) back to  to switch the device off.
 - ⇒ Please note that the lasers' current position is fixed.


Fixed position of the lasers

Before using the lasers with a fixed position, perform a self-levelling operation to make sure the lasers are properly aligned.

- Check whether the lock switch (2) is set to .
- Press the on/off button (1) to switch both lasers on.
- Press the on/off button (1) a second time to only activate the horizontal laser.
- Press the on/off button (1) a third time to only activate the vertical laser.
- Press the on/off button (1) a fourth time to switch the device off.



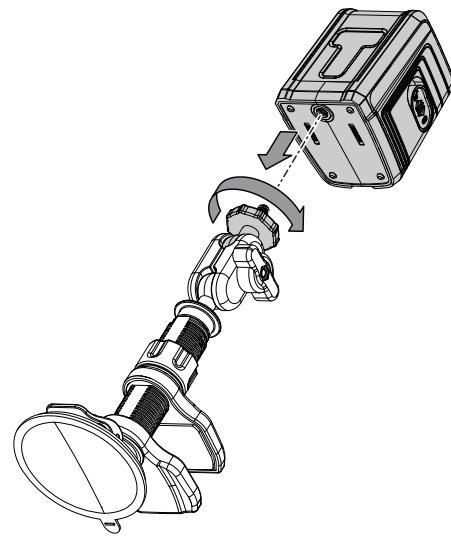
Info

You can activate the self-levelling function at any time (by setting the on/off switch (2) to ). Please note that in this case the device can only be switched off via the on/off switch (2).

Using the multifunctional mount

Proceed as follows to use the multifunctional mount with the device:

- Screw the mount into the tripod connection at the device.

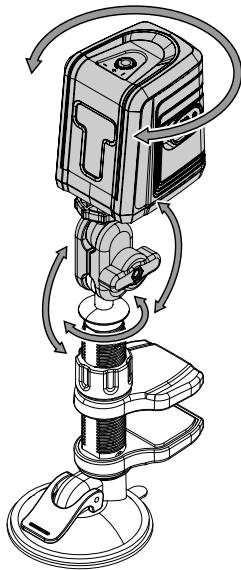


By means of the suction cup you can affix the mount to smooth surfaces such as tiles or glass.

Alternatively, the clamping jaws can be used to fasten it to a shelf or the edge of a table.

Swivelling the device

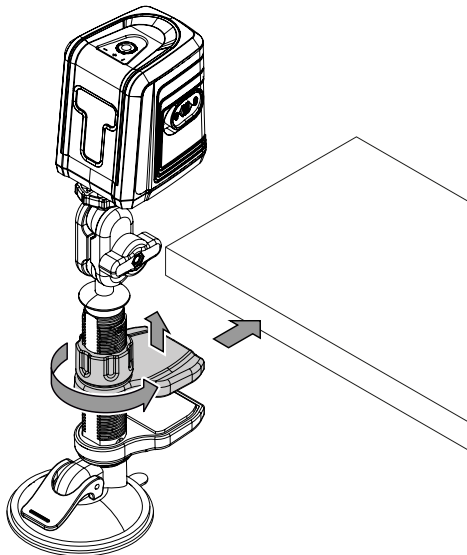
1. Loosen the wing nut (7).



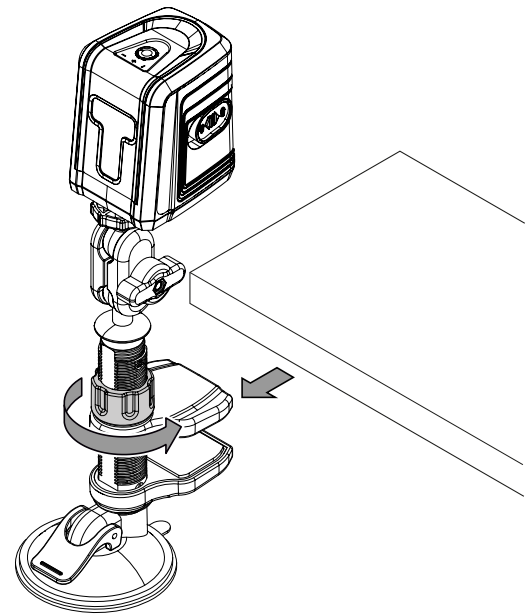
2. Swivel the device on the ball joints to move it into the desired position.
3. Retighten the wing nut (7).

Application example for the universal clamp

1. Loosen the screw (8) and push the clamping jaws (11) apart until they fit onto the carrier (here: shelf).

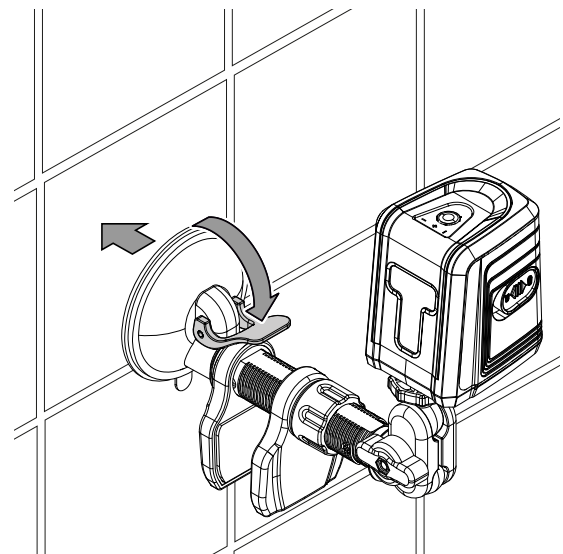


2. Tighten the screw (8) until the jaws (11) of the universal clamp are firmly attached to the carrier and the mount can no longer be moved to and fro.
3. To unfasten the clamping jaws (11), loosen the screw (8) until the retainer can be removed from the carrier without difficulty.

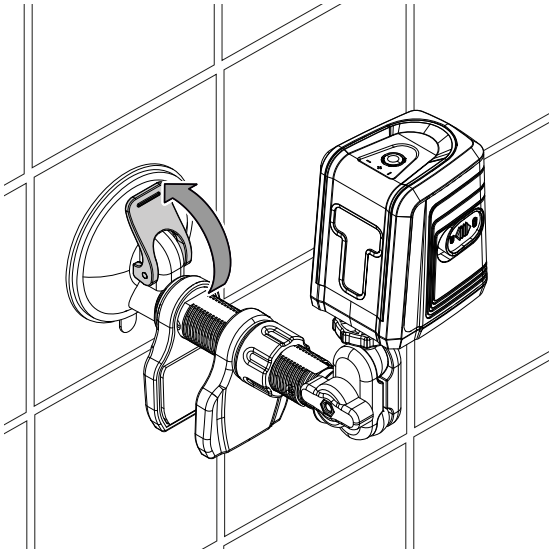


Application example for the suction cup

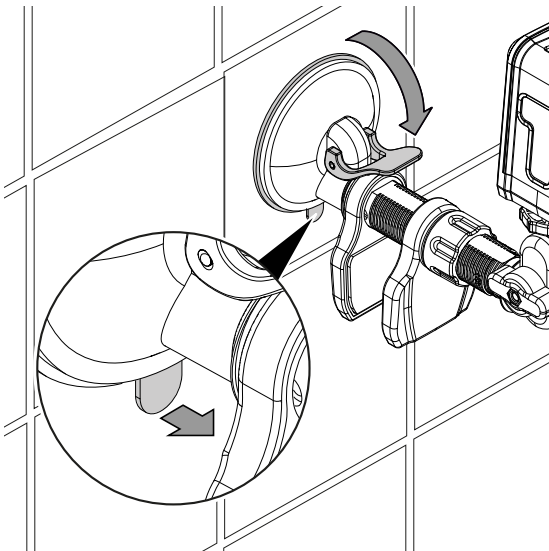
1. Make sure that the surface is smooth and clean.
2. Disengage the lever (9) at the suction cup (10).



3. Press the suction cup (10) against the surface (here: tiles).
4. Engage the lever (9) until it locks in place.



5. Check the suction cup (10) for tight fit.
6. In order to remove the suction cup (10) again, release the lever (9), then pull at the lug of the suction cup.



Maintenance and repair

Battery change

A battery change is required when the device can no longer be switched on (see chapter Inserting the batteries).

Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.

Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

For repairs or device testing, contact the manufacturer.

Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. For further return options provided by us please refer to our website www.trotec24.com.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



Li-Ion

In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

