SL300

EN

INSTRUCTIONS
SOUND LEVEL MEASURING DEVICE

TROTEC

TRT-BA-SL300-TC230102TTRT02-004-EN

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Information on the use of these instructions

Symbols

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

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.

Notice
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 instructions must be observed.

You can download the current version of these instructions via the following link:



SL300

https://hub.trotec.com/?id=44590

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.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in an 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 expose the device to strong vibrations.
- Do not open the device.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Use batteries of type 6LR61 (9 V battery).
- Never charge a battery that cannot be recharged.
- Insert the battery into the battery compartment according to the correct polarity.
- Remove the discharged battery. Batteries contain materials hazardous to the environment. Dispose of the battery according to the national regulations.
- Remove the battery from the device if you will not be using the device for a longer period of time.
- Never short-circuit the terminal of the battery!
- Do not swallow batteries! If a battery is swallowed, it can cause severe internal burns within 2 hours! These burns can lead to death!

- If you think batteries might have been swallowed or otherwise entered the body, seek medical attention immediately!
- Keep new and used batteries and an open battery compartment away from children.
- 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 (see Technical data).
- Do not expose the device to directly squirting water.
- Check accessories and connection parts for possible damage prior to every use of the device. Do not use any defective devices or device parts.

Intended use

Only use the device for sound level measurements within the measuring range specified in the technical data.

Any use other than the intended use is regarded as misuse.

Reasonably foreseeable misuse

Do not use the device in potentially explosive atmospheres, for measurements in liquids or at live parts.

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

Personnel qualification

People who use this device must:

- have read and understood the instructions, especially the Safety chapter.

Personal protective equipment



Wear hearing protection
Wear hearing protection when handling the device.

Residual risks



Warning of electrical voltage
There is a risk of a short-circuit due to liquids penetrating the housing!
Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



Warning of electrical voltage
Work on the electrical components must only be carried out by an authorised specialist company!



Warning
There is a danger of suffocation for children due to packaging material! Keep packaging films and parts away from children. There is a risk of death due to suffocation.



Warning
Risk of hearing damage!
Ensure sufficient ear protection when there are sources of loud sound. There is a danger of hearing damage.



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.

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

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

Information about the device

Device description

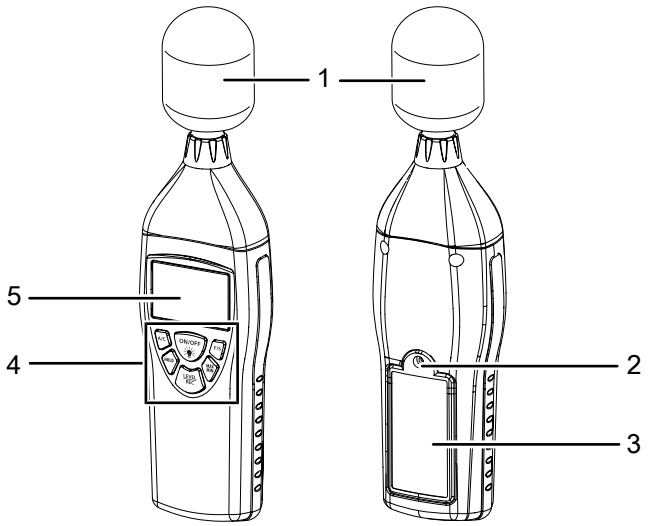
The digital sound level meter was specifically designed to perform noise measurements and quality inspections in various areas and different locations. The measurements can be carried out e.g. at your workplace, at the office, in factories, schools, at home or on busy roads. This permits the introduction of preventative measures and helps to guard against noise-induced diseases.

The device meets the requirements of the standard for digital sound level meters DIN EN 61672-1.

The device comes with the following functions:

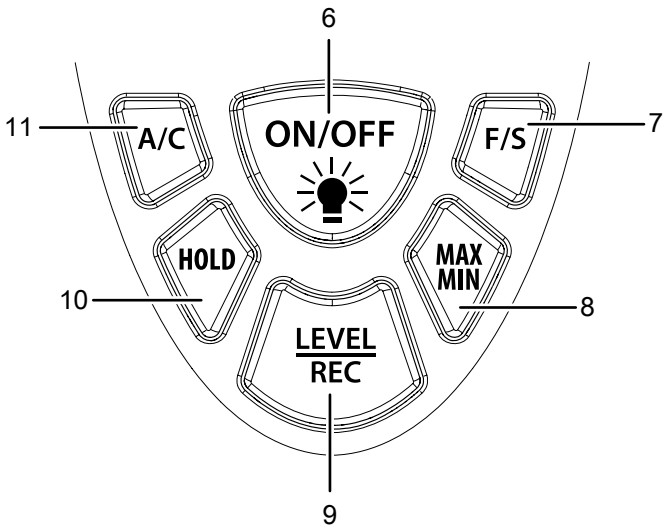
- display of maximum and minimum values
- indication when exceeding the measuring range
- indication when falling below the measuring range
- dBA and dBC display
- measuring range selection

Device depiction



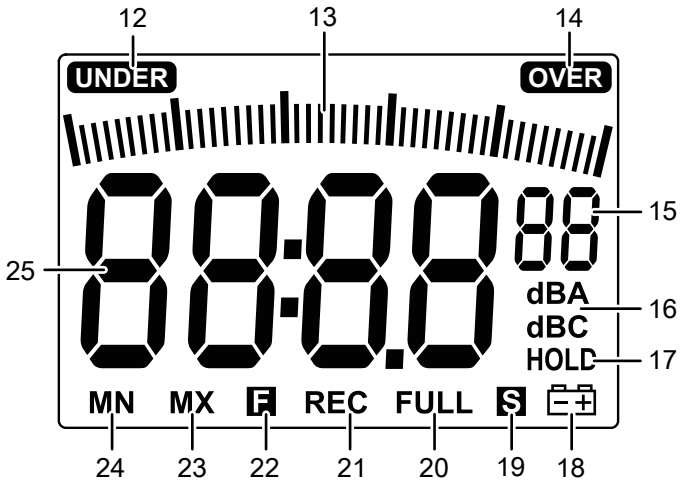
No.	Designation
1	Measuring probe with protective cap
2	Tripod thread
3	Battery compartment with cover
4	Control panel
5	Display

Control panel



No.	Designation
6	*ON/OFF* button with background illumination
7	*F/S* button
8	*MAX/MIN* button
9	*LEVEL/REC* button
10	*HOLD* button
11	*A/C* button

Display



No.	Indication	Meaning
12	*UNDER*	Fallen below measuring range
13	*Scale*	Measured value relative to the measuring range
14	*OVER*	Measuring range exceeded
15	*Measuring range*	Current measuring range: *01 = lower measuring range* *02 = medium measuring range* *03 = upper measuring range* *04 = automatic measuring range selection*
16	*Measured curve*	Current measured curve: *dB(A)* *dB(C)*
17	*HOLD*	Last measured value is shown in the measurement value display (25)
18	*Battery status*	Flashes when the battery is low
19	*P*	Slow signal evaluation: 1 s
20	*FULL*	Memory full
21	*REC*	Recording/saving active
22	*F*	Fast signal evaluation: 125 ms
23	*MAX*	Highest measured value of the current measurement is shown in the measurement value display (25)
24	*MIN*	Lowest measured value of the current measurement is shown in the measurement value display (25)
25	Measurement value display	current measured value

Technical data

Parameter	Value
Model	**SL300**
Article number	3,510,005,010
Measuring range	30 dB to 130 dB
Accuracy	± 1.4 dB as per DIN EN 61672
Resolution	0.1 dB
Frequency range	31.5 Hz to 8 kHz
Dynamic range	50 dB
Partial measuring ranges	(01): 30 – 80 dB (02): 50 – 100 dB (03): 80 – 130 dB (04): 30 – 130 dB (auto)
Display response time	500 ms
Power supply	9 V monobloc battery
Alarm function	OVER: measuring range exceeded UNDER: fallen below measuring range
Memory	50 data records
Time weighting	FAST (125 ms); SLOW (1 s)
Microphone	1/2-inch electret condenser microphone
Operating conditions	0 °C to 40 °C with 10 % to 90 % RH
Storage conditions	-10 °C to +60 °C with 10 % to 75 % RH
Weight	230 g
Dimensions (length x width x height)	210 mm x 55 mm x 32 mm
Automatic switch-off	Switch-off after approx. 15 min of non-use

Scope of delivery

- 1 x Digital sound level meter SL300 (without battery)
- 1 x Device bag
- 1 x Wind shield for microphone
- 1 x Quick guide

Transport and storage

Notice

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 the bag included in the scope of delivery in order to protect the device 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
- protected from dust ingress in the supplied bag
- at the temperature specified in the technical data
- battery is removed from the device

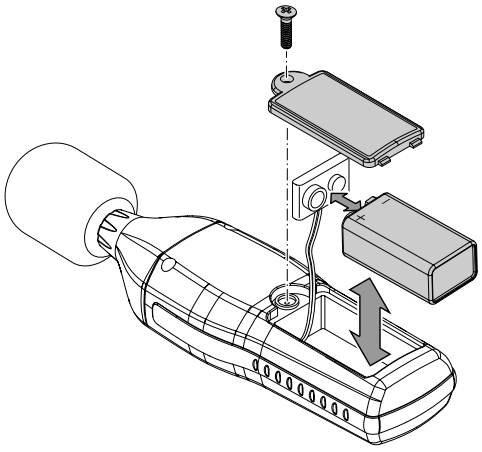
Operation

Inserting the battery

Insert a suitable battery before first use.

Notice

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



1. Open the battery compartment at the rear of the device by loosening the screw at the cover.
2. Use the battery clip to connect the 9 V battery with correct polarity.
3. Place the battery with the battery clip into the battery compartment.
4. Reattach the cover to the battery compartment.
5. Retighten the screw at the battery compartment.

Switching the device and performing measurements

Info

Please note that moving from a cold area to a warm area can lead to condensation forming on the device's circuit board. This physical and unavoidable effect can falsify the measurement. In this case, the display shows either no measured values or they are incorrect. Wait a few minutes until the device has become adjusted to the changed conditions before carrying out a measurement.

Info

Please note that the measurement of a sound source always has to be carried out directly. There must be no objects or persons located in between the microphone and the sound source, unless their influence on the sound intensity is to be measured on purpose as well.

1. Press the *ON/OFF* button (6) for approx. 3 seconds.
   ⇨ The display (5) is switched on and the device is ready for operation.
   ⇨ The current measured value is displayed in the measurement value display (25) and on the scale (13). The measuring scale (13) corresponds to the needle display of an analogue measuring device.
2. Point the device at the sound source to be measured.
   ⇨ Wait for a moment to achieve a stable measured value.

Setting the measuring range

The device has different measuring ranges which can be selected as needed or according to the expected sound level. If the expected sound level range is a known factor, one should always select the corresponding measuring range whenever possible, since this permits an optimum resolution of the scale (13) at all times.

***Measuring range* indication (15)**	**Measuring range**	**Limit values**
01	lower measuring range	30 to 80 dB
02	medium measuring range	50 to 100 dB
03	upper measuring range	80 to 130 dB
04	automatic measuring range selection	30 to 130 dB

Please proceed as follows to set the measuring range:

1. Repeatedly press the *LEVEL/REC* button (9) until the code for the desired measuring range is shown in the *Measuring range* indication (15).
   ⇨ The scale (13) will be adjusted automatically.
   ⇨ *UNDER* (12) may be displayed if the measuring range has been fallen below or *OVER* (14) if the measuring range has been exceeded. In this case, adjust the measuring range again.

Setting the measured curve (dBA/dBC)

You can choose whether your measured values are to be displayed according to dB(A) or dB(C).

Please proceed as follows to set the measured curve:

1. Repeatedly press the *A/C* button (11) until dB(A) or dB(C) is shown in the *Measured curve* indication (16).
   ⇨ The measured value will be adjusted automatically.

Setting the MAX / MIN function

By use of the MAX/MIN function you can retain either the highest or the lowest value of the current measurement. Please proceed as follows to set the MAX/MIN function:

1. Press the *MAX/MIN* button (8).
   ⇨ The *MAX* indication (23) appears on the display.
   ⇨ The measurement value display (25) will be frozen and changes only if a new higher value is measured.
2. Press the *MAX/MIN* button (8) again.
   ⇨ The *MIN* indication (24) appears on the display.
   ⇨ The measurement value display (25) will be frozen and changes only if a new lower value is measured.
3. Press the *MAX/MIN* button (8) again to quit using the MAX/MIN function.

Setting the HOLD function

By use of the HOLD function you can retain the currently measured value.

Please proceed as follows to set the HOLD function:

1. Press the *HOLD* button (10).
   ⇨ The *HOLD* indication (17) appears on the display.
   ⇨ The measurement value display (25) will be frozen.
2. Press the *HOLD* button (10) again.
   ⇨ The currently measured value is indicated.
   ⇨ The *HOLD* indication (17) disappears.

Setting the time weighting

You can choose between a fast and slow time weighting. This function controls the speed at which the device processes an incoming sound signal and displays it as a measured value.

- FAST: 1/125 ms (real-time signal evaluation)
- SLOW: 1/s (average signal evaluation)

Please proceed as follows to set the time weighting:

1. Press the *F/S* button (7) until the desired indication *F* (22) or *S* (19) is displayed.

Setting the time and date

Use the following buttons to navigate through the menu for time and date:

Button	**Function**
LEVEL/REC (9)	Setting a higher value
MAX/MIN (8)	Setting a lower value
HOLD (10)	Saving the settings and leaving the menu

Please proceed as follows to set the time and date for the device:

✓ The device is switched off.

1. Press and hold the *A/C* button (11) while switching the device on.
2. Release the *A/C* button (11) once *Set* appears in the measurement value display (25).
   ⇨ The device is now in adjusting mode.
   ⇨ The measurement value display (25) shows the current date in day:month:year format.
3. Press the *A/C* button (11) again to switch to the time indication.
4. The measurement value display (25) shows the current time in hour:minute:second format.
5. Press the *A/C* button (11) to set the minutes.
6. Press the *A/C* button (11) to set the hours.
7. Press the *A/C* button (11) to switch to the date setting.
   ⇨ The measurement value display (25) shows the current date in day:month:year format.
8. Press the *A/C* button (11) to set the day.
9. Press the *A/C* button (11) to set the month.
10. Press the *A/C* button (11) to set the year.
11. Press the *A/C* button (11) again.
    ⇨ The *rSt* indication appears in the measurement value display (25).
12. Decide whether you want to save the settings made:
    ⇨ To save the settings made, press the *A/C* button (11) and then the *HOLD* button (10).
    ⇨ To discard the settings made, repeatedly press the *A/C* button (11).
    ⇨ To reset the settings for time and date to the factory default, press the *HOLD* button (10).

Recording measurement series on the device (REC/Logging)

Notice

The device can store 50 measured values. If the memory is full, the *FULL* indication (20) appears. Delete some or all of the saved values to be able to save another measurement.

1. Press the *HOLD* button (10) to freeze a displayed value.
2. Press the *LEVEL/REC* button (9) to activate the device's recording function.
   ⇨ The *REC* indication (21) appears.
   ⇨ The frozen value will be stored in the device memory with time and date.
3. Press the *HOLD* button (10) again to return to the measuring process.

Read data

✓ The device is switched off.

1. Press and hold the *LEVEL/REC* button (9) while switching the device on.
2. Release the *LEVEL/REC* button (9) once *DATA* appears in the measurement value display (25).
3. Press the *LEVEL/REC* button (9) to switch between the measuring values stored in the memory.
4. Press the *HOLD* button (10) or *MAX/MIN* (8) to see date or time of the record.
5. Press the *F/S* button (7) to exit the memory.

Deleting data memory

✓ The device is switched off.

1. Press and hold the *HOLD* button (10) while switching the device on.
2. Release the *HOLD* button (10) once *CLR* appears in the measurement value display (25).
   ⇨ The data is deleted from the data memory.

Switching the background illumination on or off

The device comes with an optionally selectable background illumination. Please proceed as follows to switch the background illumination on or off:

✓ The device is switched on.

1. Press the *ON/OFF* button (6) briefly to switch the background illumination on.
2. Press the *ON/OFF* button (6) again briefly to switch the background illumination off.

Assembling the tripod

The device is equipped with a 1/4 inch tripod thread. If required, you can mount the device onto a tripod.

Switching the device off

The device comes equipped with an automatic switch-off function and switches off automatically if no button was pressed for approx. 15 minutes. Please proceed as follows to switch off the device manually:

1. Press and hold the *ON/OFF* button (6) until the device is switched off.
   ⇨ The countdown *P-3, P-2, P-1* appears on the display after which the device is switched off.

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.

The device does not switch on:

- Check the charging status of the battery. Change the battery, if required.
- Make sure that the battery is properly positioned. Check the polarity is correct.
- Never carry out an electrical check yourself; instead, contact your manufacturer's customer service.

Display segments are only faintly visible or flicker:

- Do not carry out any more measurements.
- The battery voltage is too low. Exchange the battery immediately.

The device displays implausible measured values:

- Do not carry out any more measurements.
- The battery voltage is too low. Exchange the battery immediately.
- The protective cap of the probe may be dirty or damaged. Check the protective cap of the probe.
- The measuring range or the measured curve may be set incorrectly. Check the settings.

Maintenance and repair

Battery change

A battery change is required when the *Battery status* indication (18) flashes or when the device can no longer be switched on (see chapter Inserting the battery).

Calibration

The device is already factory-calibrated and optimally adjusted. A recalibration requires special tools. If recalibration is required, please contact the manufacturer’s customer service and do not carry out the calibration yourself.

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.

Disposal

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



The icon with the crossed-out wheeled bin indicates that this device and any associated components (e.g. remote controls) must not be disposed of with household waste at the end of their life, in accordance with the Waste Electrical and Electronic Equipment Directive (2012/19/EU) and national laws.

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. You can also find out about other return options that apply for many EU countries on the website https://hub.trotec.com/?id=45090. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

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.



This icon with the crossed-out wheeled bin indicates that batteries or accumulators must not be disposed of with household waste at the end of their life. If the device contains batteries or accumulators that contain mercury, cadmium or lead, the respective chemical symbol (Hg, Cd or Pb) is shown below the icon of the crossed-out wheeled bin. To prevent environmental pollution, do not carelessly leave batteries or electrical and electronic equipment containing batteries in public areas. In the European Union, batteries and accumulators must be returned to a designated collection point in accordance with REGULATION (EU) 2023/1542 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 July 2023 concerning batteries and waste batteries. Remove batteries/accumulators and dispose of them separately according to the relevant legal requirements.

Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) and the Waste Batteries and Accumulators Regulations 2009 (SI 2009/890) (as amended), devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

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