ONE
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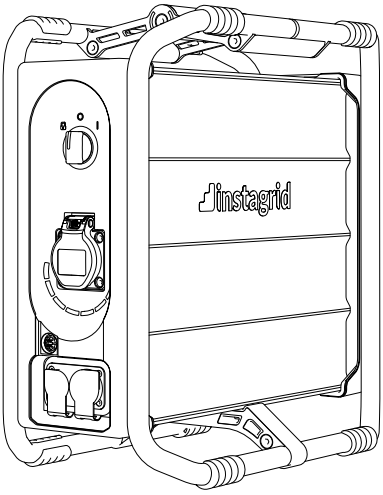
User Manual V1.0



instagrid

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WARRANTY INFORMATION

Instagrid warrants that the instagrid ONE portable power system is free from defects in materials and workmanship and agrees to repair or replace any defective parts free of charge. The limitation period for such claims is 24 months after delivery.

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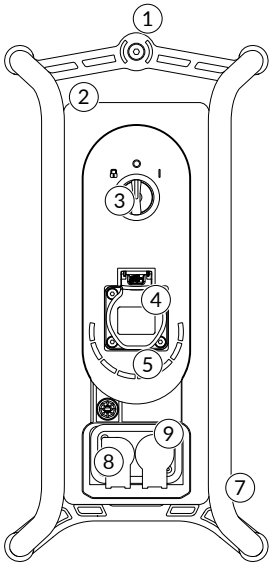
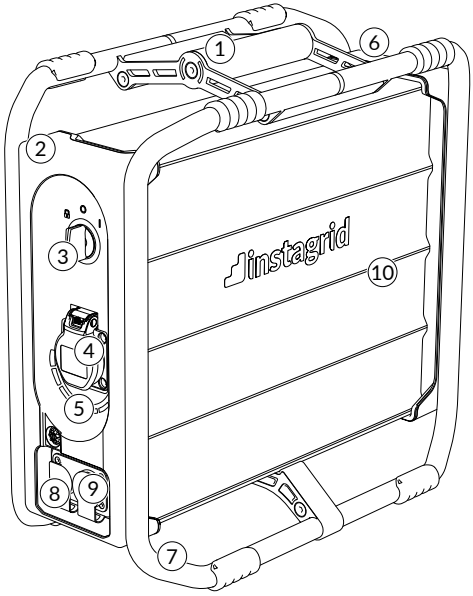
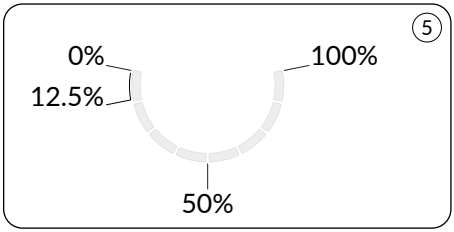
1. SYSTEM OVERVIEW







1. Carry handle
2. Front end cap
3. Rotary switch
4. CEE 7/X output
5. LED indicator
6. Rear end cap
7. Frame
8. AC charging input
9. NAC 3PX - TOP output
10. Housing

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2. SYMBOLS

Note	Information that is especially important
Caution	Potentially dangerous situation which, if not avoided, may lead to minor minor injury.
Warning	Potentially dangerous situation which, if not avoided, may result in serious injury or death.
Danger	Imminent danger that will result in serious injury or death.
	Signifies general danger
	Danger of electric shock
	Read the operating and safety instructions
	Protection class II
	Do not dispose as household waste
	CE marking: confirms the conformity of electronic devices with the directives of the European Community.

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3. TECHNICAL SPECIFICATIONS

Parameter	Value	Comment
Output voltage	230 V / 50 Hz	European standard for power quality
Nominal power	3,600 W (16 A)	RMS
Capacity	2,074 Wh	
Charging time	Less than 3 h (up to 100 %) / 1.5 h (up to 50 %)	
Charge input voltage	100-250 V / 45-65 Hz	
Charging capacity	1,000 W (4 A)	
On (idle)	150 h	230 V output active, without load
Storage	> 3 years	Switch in ⏺ or 🔒 position
Operating temperature	-20 to 45 °C	No charging below 0 °C
Weight	19.8 kg	Including the frame
Dimensions	420x210x420 mm	Including the frame
Degree of protection (IP)	IP54+	Water- and dust-proof
Noise	< 10 dB	Noiseless, passive cooling
150 % boost (> 300 s)	5,400 W (24 A)	RMS
200 % boost (> 120 s)	7,200 W (32 A)	RMS
250 % boost (> 30 s)	9,000 W (40 A)	RMS
Peak performance	18,000 W (80 A)	RMS
Output circuit breaker	16 A	E-fuse with C characteristic
Max. short-circuit current	160 A	
IEC degree of protection	Class II / double insulated	To IEC 61140
Socket	CEE 7/3 socket (16 A)	
Second socket	Neutrik powerCON TRUE1	
Charging input	Neutrik powerCON TRUE1	Includes the charging cable

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4. SAFETY INSTRUCTIONS

4.1 GENERAL INFORMATION

The instagrid.ONE portable power system is designed to power mobile appliances, power tools and other equipment on construction sites, both indoors and outdoors. The portable power system contains lithium-ion batteries with an energy content of less than 100 Wh each. Cells in lithium-ion batteries are gas-tight and non-hazardous, provided the manufacturer's instructions are followed during use and handling. The user is liable for damage stemming from improper use.

4.2 HOW TO USE THE SAFETY INSTRUCTIONS

WARNING! Read all safety warnings and instructions. Failure to observe the safety instructions could result in electric shock, fire or serious injury.
Keep all safety instructions within easy reach and close to the equipment.

4.3 INSTRUCTIONS FOR SAFE USE OF THE DEVICE

- Do not open the device under any circumstances. In particular, do not open the end caps **[2 | 6]**. Maintenance and repair may only be carried out by trained personnel.
- Do not change the operating elements and sockets of the device. They may only be replaced by trained personnel.
- Do not short-circuit the outputs **[4 | 9]** of the device.
- Do not touch the electrical contacts **[4 | 8 | 9]** of the device with fingers, tools or any other objects.
- Do not use the device as a work surface, such as a provisional workbench for sawing.
- Do not immerse the housing **[10]** of the device in water or mud.
- In the event of a battery fire, extinguish the fire with water. If possible, cover the device completely with water. Call the fire brigade and inform them that lithium-ion batteries are on fire.
- Fumes may be released if the device is damaged or used improperly. Exposure to these fumes may cause irritation of the respiratory tract. In this case, ventilate the room and consult a doctor in case of discomfort.
- In case of improper use, the batteries inside the device may leak. In case of contact, rinse off with water. If the liquid gets into the eyes, seek medical attention. Contact with battery acid can cause skin irritation or burns.

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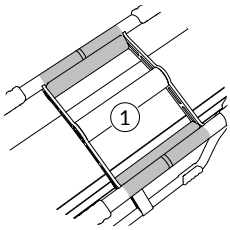
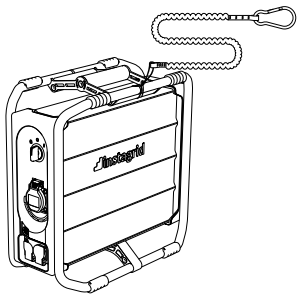
- Do not dispose of the device or the batteries it contains in a fire or hot oven and avoid mechanically crushing or cutting the batteries, as this may result in fire or an explosion.
- Do not store the device at temperatures above 65 °C and keep it away from external heat sources (e.g. prolonged exposure to sunlight, radiant heaters, fire).
- Do not store or use the device in potentially explosive atmospheres.
- The device must be used in accordance with the operating limits specified in the data sheet and/or the technical specifications.
- Do not move the device by means of cranes, lifting aids or other lifting equipment.
- To reduce the risk of dropping the device or toppling it over, resulting in injury, make sure that it is safely positioned, including during operation when equipment is connected. Ensure easy access to the connected equipment as well as sufficient cable length. Connected cables must not be under tension.
- Avoid dropping the device to protect it from damage. Ensure that the device is securely placed on a non-slip surface and that it does not protrude over the edge of the surface. Secure the device against falling.





  After a fall, always check the device for damage. Do not continue to use the device if there is any external damage. This does not apply to damage to the frame [7] or the carry handle [1]. In the event of any other damage, activate the transport mode by setting the rotary switch [3] to 🔒. Contact customer service immediately.
- Do not allow objects to fall on the device or the shipping box (with the device inside). If such an impact occurs, always check the device for damage. Do not continue to use the device if there is any external damage. This does not apply to damage to the frame [7] or the carry handle [1]. In the event of any other damage, activate the transport mode by setting the rotary switch [3] to 🔒. Contact customer service immediately.
- Do not use the device as a step or climbing aid.
- Keep the protective cap of the AC charging input [8] closed when no charging cable is plugged in.

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- Observe the local regulations for the safe operation of electrical equipment at all times, especially those applying to the use of portable power generators. The device meets the requirements for protective separation of VDE 0100.
- Care must be taken to carry out regular testing as prescribed. Furthermore, do not connect any defective equipment to the device.
- Connecting power generators to the outputs [4 | 9] of the device, such as plug-in PV systems or portable power generators, may damage the device and the generator.
- The device complies with protection class II and does not have to be earthed during operation. Moreover, the device is not suitable for earthed operation.
- Before switching on the device, ensure that all connected equipment is switched off.
- Before connecting equipment to the device, make sure that the equipment is switched off.
- After operation, equipment connected to the device must always be switched off.
- Do not use the device to operate life-sustaining medical equipment.
- The device may only be charged using the charging cable supplied.
- The device may only be operated within the specified input voltage range.
- Do not wash the device with water jets.
- Do not expose the device to contact with chemicals, fuels or lubricants.
- Children and people with disabilities and impairments may only operate the device under supervision.
- Inspect the device and all accessories for damage before each use. In doing so, also make sure that the LED indicator [5] is functioning correctly. After the device is switched on, each segment of the LED indicator [5] must light up at least once. In the event of any other damage, activate the transport mode by setting the rotary switch [3] to . Do not use the device if it is damaged or defective. Contact customer service immediately.

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5. OPERATION

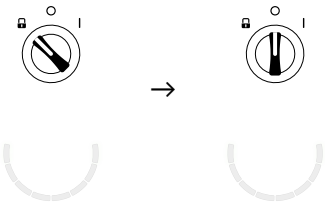
5.1 COMMUNICATION

The device is equipped with an LED indicator [5] that is used to communicate information.

The logic is as follows:

- LED indicator [5] lights up red:
  → Error that cannot be corrected by the user, instagridONE must be serviced.
- LED indicator [5] lights up yellow:
  → Temporary error, incorrect use (follow the instructions below).
- LED indicator [5] lights up green:
  → Device is ready for use (follow the instructions below).
- LED indicator [5] does not light up:
  → Device is switched off (in transport or standby mode).
  → Device is fully charged (in standby mode).
  → Device is fully discharged (in operating mode).
  → There was an error.
  → LED indicator **[5]** defective.

5.2 COMMISSIONING



The device is shipped with a low level of charge. Depending on the application, the device may therefore need to be charged before it is used for the first time.

Deactivate the transport mode and set the device to standby mode by turning the rotary switch [3] from 🔒 to ⏺ (clockwise). The outputs [4 | 9] are voltage-free. The AC charging input [8] is active. The LEDs [5] will not light up.

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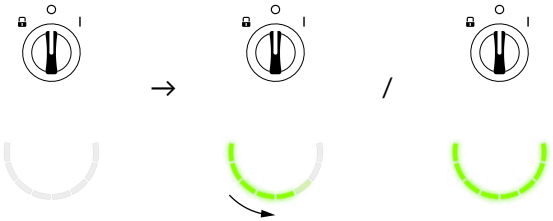
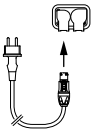
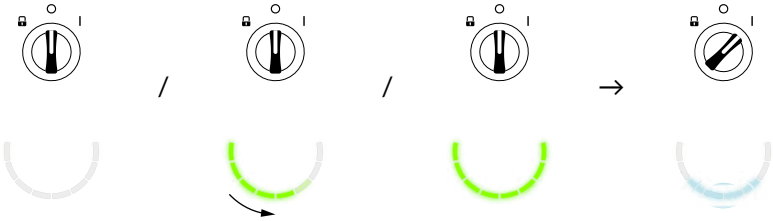
5.3 CHARGING





The rotary switch must be set to ⏺ (standby mode). To charge the device, connect the charging cable to a wall socket via the AC charging input [8]. While the device is charging, all segments of the LED indicator [5] will light up green from left to right. The outputs [4 | 9] are voltage-free. Permanently green LED segments indicate the current charging status. Each LED segment corresponds to a 12.5 % increase in the battery charge. As soon as the device is fully charged, all LED segments [5] will light up green for 10 seconds. If the device is already fully charged, all LED segments [5] will light up green for 10 seconds as soon as the charging cable is plugged in. After 10 seconds have elapsed, the LED indicator [5] will go out. Next, remove the charging cable and set the rotary switch [3] either to 🔒 (to activate the transport mode) or to ❙ (to operate a connected device).

5.4 DISCHARGING



Deactivate the standby mode and activate the operating mode by turning the rotary switch [3] from ⏺ to ❙ (turn clockwise). While the LEDs [5] light up in the start-up sequence, the device will perform an initial self-test.

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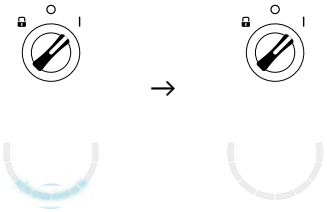
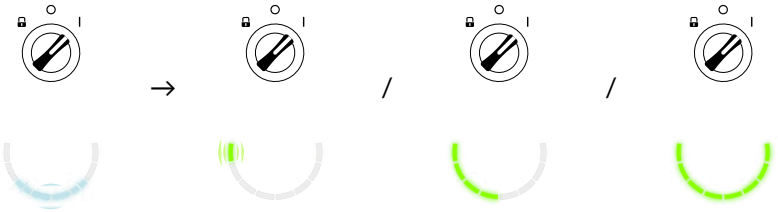


If the LEDs [5] go out after the start-up sequence, the device is completely discharged and must first be charged (see section 5.3 CHARGING).



If one or more LEDs [5] light up green after the start-up sequence, the device is ready for operation via the outputs [4 | 9]. Equipment can now be connected to either one of the two outputs [4 | 9]. During operation, the number of green LEDs [5] indicates the current state of charge. Regularly check the state of charge during operation. If the device is almost completely discharged, the LED on the far left will flash green. The device should then be recharged as soon as possible (see section 5.3 CHARGING). After operation, set the device to standby mode by turning the rotary switch [3] to ⏻ (see section 5.3 CHARGING), or activate the transport mode by turning the rotary switch [3] to ⏻ (see section 5.5 TRANSPORT MODE).

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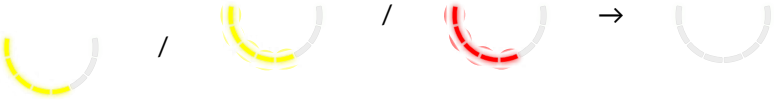
5.5 TRANSPORT MODE

Set the rotary switch [3] to 🔒 (turn anticlockwise) to activate the transport mode.

6. TROUBLESHOOTING



After the LED indicator [5] has communicated an error by means of a red or yellow signal, it will go out.

6.1 OVERCURRENT

If the LED indicator [5] lights up yellow in operating mode, the outputs [4 | 9] have been deactivated due to an overcurrent. If this happens, follow the steps outlined below:

- Set the rotary switch [3] to ⏺.
- Wait a few seconds and set the rotary switch [3] to ❙ again to reset the device to operating mode.

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6.2 DEVICE TOO COLD/TOO HOT

If the LED indicator [5] flashes yellow, the device is either too cold or too hot, causing the outputs [4 | 9] to be deactivated or charging to be interrupted.
If this happens, follow the steps outlined below:

- If the device is charging:
  1. If possible, move the device to a location with moderate temperature. Make sure that the device is not exposed to direct sunlight. It will automatically start charging again once the temperature is within the permissible range.
  2. Should this not be possible, change the mode of the device by removing the charging cable. Continue with step 1 at a later time.

- If the device is in operating mode:
  1. Change the mode of the device by turning the rotary switch [3] to ◉.
  2. If possible, move the device to a location with moderate temperature. Make sure that the device is not exposed to direct sunlight.
  3. As soon as the temperature is again within the permissible operating range, the device can be operated again by turning the rotary switch to |.
  4. Should this not be possible, continue with step 1 at a later time.

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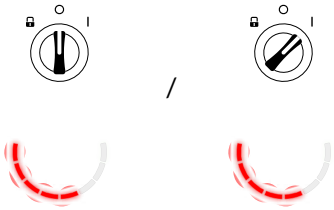
6.3 SYSTEM ERROR



If the LED indicator [5] flashes red, a system error has occurred. If this happens, follow the steps outlined below:

1. Switch off the device by activating the transport mode (set the rotary switch [3] to 🔒). If necessary, remove the charging cable.
2. Contact instagrid.

6.4 MALFUNCTION

If no error is indicated and it is still not possible to operate any equipment using the portable power system, follow the steps outlined below:

1. Check whether the connected equipment is operational.
2. Make sure that the portable power system is set to operating mode (set the rotary switch [3] to I).
3. Make sure that the portable power system is switched on and that the LED indicator [5] lights up green.
4. If the LED indicator [5] has gone out completely although the portable power system is switched on, it must be charged.
5. If it is still not possible to operate equipment using the portable power system, contact instagrid.

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7. STORAGE

Store the device in transport mode and without any connected cables or equipment.
Do not store the device in a discharged state for longer periods of time. This may cause deep discharge of the device, requiring it to be recommissioned by instagrid.
Charge the device at least once every three months.
For a long service life, store the device at temperatures between 0 and 23 °C in a low-humidity environment.

8. TRANSPORT

The integrated Li-ion batteries are subject to the provisions of hazardous materials law. Do not ship the device if the battery is damaged. Observe local regulations when shipping. Please also make sure to observe any additional local regulations that may apply.
Please note the additional information on transport in our transport instructions, the latest version of which is available on our homepage.

9. CLEANING AND MAINTENANCE

Risk of injury due to electric shock!
The device does not require regular maintenance. All repairs must be carried out by instagrid.

When cleaning,

- make sure that the transport mode is activated;
- always disconnect the charging cable from the socket and unplug any connected equipment;
- never open the housing [10];
- do not use water jets. Other than that, wet cleaning is permitted;
- only use approved chemicals.

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10. DISPOSAL

The integrated battery modules may only be removed from the device by a qualified specialist. If not stored and disposed of properly, the chemicals contained in batteries can be harmful to the environment and to human health and may cause fires and explosions. To protect people and the environment and to recover recyclable materials as much as possible, batteries must be collected separately from unsorted municipal waste and recycled.

The device is marked with the crossed-out wheeled bin symbol. This means that the device must not be disposed of with household waste and must be collected separately, in accordance with the EU directives on waste electrical and electronic equipment and batteries and accumulators and the relevant national legislation.
For disposal, make sure the device is discharged (if possible), secure it against short-circuiting and take it to an authorised collection point, where it can be disposed of free of charge. Observe the regulations for environmentally friendly disposal applicable in your region.

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11. CERTIFICATION

IEC 62281: 2017 UN38.3 REV. 6 AN. 1.

Safety of primary and secondary lithium cells and batteries during transport

IEC 62133-2: 2017

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications

IEC 62368-1: 2014 + A11: 2017

Audio/video, information and communication technology equipment - Part 1: Safety requirements

EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3

Electro-magnetic compatibility (EMC)

IEC 60529-1: 2017-02

Degrees of protection provided by enclosures (IP code)

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12. CONTACT

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