



HERON 8898141 Automatic Transfer Switch Unit User Manual

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8898141

Automatic Transfer Switch (ATS) Unit



Translation of the original user's manual

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8898141 Automatic Transfer Switch Unit

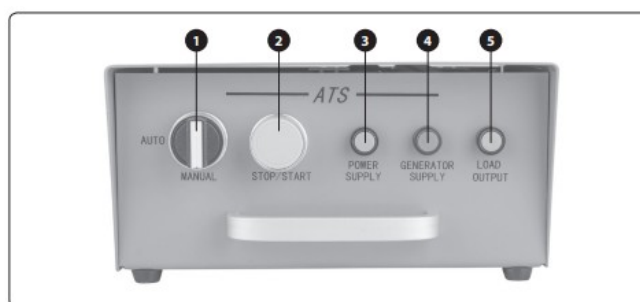


Fig. 1

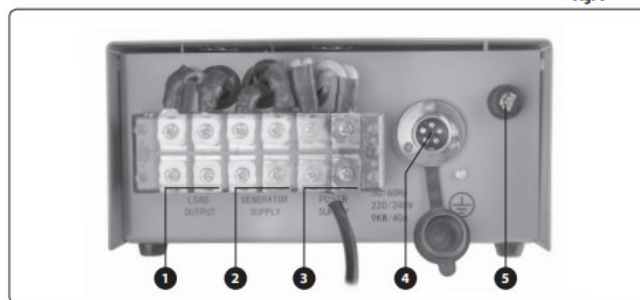


Fig. 2

Introduction

Dear customer,

Thank you for the confidence you have shown in the HERON® brand by purchasing this product.

This product has been tested for reliability, safety and quality according to the prescribed norms and regulations of the European Union.

Contact our customer and consulting centre for any questions at: www.heron-motor.info

Manufacturer: Madal Bal a. s., Průmyslová zóna Příluky 244, 76001 Zlín, Czech Republic Date of issue: 8. 4. 2024

Description – purpose of use

✓ ATS switch unit HERON® 8898141 is intended for automatically starting generator HERON® 8896326 in the event of a power outage in the power grid and for automatically turning of f the generator when power is restored in the mains power grid. The ATS unit is an inter-element between the generator and the power distribution grid. This ATS unit model is primarily intended for the HERON® 8896326 generator model, and if this ATS unit is used with another generator mode, which has an ATS function, then this generator must function correctly. ATS switch unit HERON® 8898141 is intended for the voltage and current loads specified in the Technical specifications. It must not be used for higher voltages or currents than specified. The ATS unit is intended for being built-in and connected by a qualified person for protection against accidental contact with parts that are under life-threatening

voltage current. The ATS unit must also be protected against rain, against the ingress of water, against the ingress of dirt, etc.

Technical specifications

Model/order number	8898141
Rated voltage	220-240V~50/60 Hz
Rated current	40 A
Rated power input	9 kW
Short term max. current	60 A
Weight	3.3 kg
Dimensions (H × W × D)	106 × 213 × 230 mm
Operating ambient temperature	-20°C to +40°C
Atmospheric humidity (EN IEC 60947-1)	Max. 50% at 40°C or 90% at 20°C



SAFETY WARNINGS

- Prior to using the ATS unit, please read this user's manual for the use of the ATS unit and generator and make sure that you understand the information. Keep this user's manual with the product so that its user may become acquainted with it. Prevent this user's manual from being damaged.
- Due to the risk of injury by life-threatening voltage levels, adhere to all the safety directives and instructions and reasonably expect and anticipate the results of your actions with respect to safety.
- The ATS unit may only be connected and installed by a person with the required qualifications for protection against accidental touch contact with parts that are under life-threatening voltage levels and also with respect to the operating conditions, the work environment and workplace risks. Safe operation must be approved by an authorised inspection technician.

Parts and control elements

Fig. 1, position – description

1. Switch for setting the automatic generator start/stop mode – position AUTO, position MANUAL for generator start/stop by pressing the START/STOP button.
2. START/STOP button for manually starting/stopping the generator by pressing the button (must be set to the MANUAL position using the toggle switch).
3. POWER SUPPLY: if the indicator light is lit, there is voltage current in the power grid, and the power grid must be connected at terminal position marked „POWER SUPPLY“.
4. GENERATOR SUPPLY: if the indicator light is lit, the voltage-current is being supplied from the generator to the terminal position marked GENERATOR SUPPLY; if the generator is connected to the terminal block – however, for the function of automatic starting/ stopping of the generator this connection is not necessary – it is an additional function for connecting LOAD OUTPUT – see below.

5. **LOAD OUTPUT:** if the indicator light is lit – the position LOAD OUTPUT on the terminal block is under voltage-current – for the automatic generator start/stop function it is not relevant – it is an additional function – for connecting an external electrical device to this position on the terminal block – see below.

Fig. 2, position – description (terminal block)

1. **LOAD OUTPUT:** position on the terminal board for external class II protection electrical devices – i.e. an electrical cable of a class II electrical device has only an „L“ and „N“ wire. It is not important to which terminal position on the LOAD OUTPUT the „L“ wire and the „N“ wire of the external electrical device is connected. This is only an additional function – for the automatic starting/stopping of the generator it is not necessary.
2. **GENERATOR SUPPLY:** position on the terminal block for connecting the cable from the 230 V socket of a generator for the required connection of voltage-current to the position on the terminal block LOAD OUTPUT for connecting an external electrical device – for the automatic generator start/stop function this connection is not necessary. It is not important to which terminal position on the GENERATOR SUPPLY the „L“ wire and the „N“ wire is connected.
3. **POWER SUPPLY:** position on the terminal block for connecting the „L“ and „N“ wires coming from the mains power grid – it is not important to which terminal position on the POWER SUPPLY the „L“ wire and the „N“ wire is connected.
4. Connector for connecting the 12 V cable connected to the 12 V ATS connector of the generator.
5. Fuse F10 A/250 V

Connecting cables for automatic starting/ stopping of a generator

1. Place the ATS unit on a dry, solid, level, electrically non-conductive surface. Do not place it on the generator.
2. Connect the 12 V cable to the ATS socket of the generator and to the 12 V socket of the ATS unit (fig. 2, position 4). Insert the plug into the socket in straight fashion so that it is entirely inserted around its entire perimeter. This is important due to the conductive connection of all poles between the plug and the socket. Then fully screw on the flange and pull it firmly tight.
3. Ensure that a 12 V battery is connected to the generator and that the battery is sufficiently charged. The terminal voltage on the battery without load should not be less than approx. 12.7 V, otherwise the switching function may not work.
4. Ensure that there is no voltage in the electrical power grid and connect the electrical power grid cable according to the following procedure: To one of the two terminals in the position POWER SUPPLY connect the „L“ wire and to the other terminal connect the „N“ wire of the cable from the power grid – it is not important to which terminal the „L“ wire is connected and to which the „N“ wire is connected, however, each must be connected to an individual terminal for the given position on the terminal block. Ensure that a sufficiently long part of the wire is inserted beneath the metal clamp plate and that the screw is subsequently firmly tightened, so that the wire is secured in the terminal block and that it cannot come loose from the terminal block.

Information about the connection position of the „L“ and „N“ wires:

This is a switching device where it is not important in which position the „L“ and „N“ wires are connected on the terminal block for the given position POWER SUPPLY.



- After properly connecting the wires to the terminal block, place the cover over the terminal block.

SETTINGS FOR THE GENERATOR AND THE ATS SWITCH

- Set the power switch of the generator to the „OFF“ position.
- Set the toggle switch (fig. 1, position 1) to the „MANUAL“ position.

ATTENTION! If there is no voltage-current in the power supply grid or an „L“ and „N“ wire is not connected to the terminals in the position POWER SUPPLY (i.e. the POWER SUPPLY indicator light is not lit) and the key of the power switch is in the „ON“ position, setting the toggle switch of the ATS unit to the „AUTO“ position will cause the generator to start up automatically.

- Renew the voltage-current in the power grid – when there is voltage-current in the grid, the indicator light POWER SUPPLY and LOAD OUTPUT will be lit.
- Set the toggle switch (fig. 1, position 1) to the AUTO position for automatic generator start/stop or to the MANUAL position for starting/stopping by pressing the START/STOP button (fig. 1, position 2).
- Only as the last step, turn the key of the power switch to the ON position. If the toggle switch (fig. 1, position 1) is in the AUTO position, an outage in the power supply in the power grid will result in the generator starting automatically. If the toggle switch is in the MANUAL position, the generator can be started or stopped by pressing the START/STOP button.

Information regarding the automatic starting/ stopping of the generator:

The generator will automatically be started several seconds after a power outage in the distribution power grid – or also if the „L“ and „N“ wire is not connected in the POWER SUPPLY terminal position.

The generator will be stopped automatically several seconds after power in the distribution power grid is restored – it is not instantaneous.

- In the event that the generator is used as a backup power source, it should be put into test operation (started-up) 1-2× per month into test mode in order to verify that it is ready for backup use.

INFORMATION ABOUT LOAD OUTPUT FOR THE CONNECTION OF AN EXTERNAL ELECTRICAL DEVICE

The position of the terminal block LOAD OUTPUT is intended for the connection of an external class II protection class electrical device to the ATS unit. The cable of a class II protection class electrical device has only an „L“ and „N“ wires. It is not important to which terminal position on the LOAD OUTPUT the „L“ wire and the „N“ wire of the external electrical device is connected. The position of the terminal block LOAD OUTPUT will be under voltage-current for the powering of an external electrical device only in the case, where the wires „L“ and „N“ coming from a cable connected to the generator are connected to the terminal GENERATOR SUPPLY and the generator is together with the ATS unit connected via a 12 V cable. When the generator is started, the indicator lights GENERATOR SUPPLY and LOAD OUTPUT will be lit.

Information about LOAD OUTPUT:

- If voltage-current is supplied to the position in the terminal block GENERATOR SUPPLY without the connection of the ATS unit to the generator via a 12 V cable, the LOAD OUTPUT indicator light will not be lit and the connected external electrical device will not be powered.
- The LOAD OUTPUT indicator light will be lit when voltage-current is supplied to the position of the terminal block POWER SUPPLY, i.e. when there is power in the mains power grid.
- It is not possible to use the START/STOP button on the switch unit to control the presence of voltage-current at the position of the terminal LOAD OUTPUT unless the toggle switch (fig. 1, position 1) is in position MANUAL, i.e. it is not possible to use the START/STOP button to control the operation of the connected external electrical device. The START/STOP button can only be used to start or stop the generator, when the toggle switch (fig. 1, position 1) is set to the position MANUAL.

Safety Instructions

- Connection, installation and operation of the ATS unit with respect to the operating and work environment and workplace risks must be performed by an authorised, qualified person. Safe operation must be approved by an authorised inspection technician.
- The wires must be firmly attached to the terminal block so that the wires cannot fall out of the terminal connectors, e.g. in the event that the wires are tripped over or the ATS unit is knocked over, etc. and the voltage-current could thus come into contact with conductive surfaces or injury by electrical shock could eventuate.
- It is necessary to protect the electrical equipment against all unfavourable climatic conditions, high temperatures (above 40°C), radiant heat sources, ingress of water, dust, which becomes conductive and may cause a short circuit, and other items, e.g. small wires, metal shavings, etc., which may lead to a short circuit.
- Do not locate the ATS unit on a metal (conductive) cabinet or on metal surfaces (e.g. on the generator), because life threatening voltage-current could be supplied to the metal in the event that a wire comes loose from the terminal block of the ATS unit, which may lead to the injury/death of persons by electrical shock.
- Do not locate the ATS unit on a wet surface.
- Do not locate the ATS unit on the generator, on moving or vibrating objects or surfaces, etc., so that the wires in the terminal block are not released or that the ATS unit does not fall down.
- Do not perform electrical installation work with wet hands.
- The cables leading from the ATS switch unit must, for the above-mentioned reasons, be protected against tripping in order to prevent knocking the ATS unit over.
- The ATS unit must be protected against children and unqualified persons. The installation enclosure of the ATS unit must be appropriately designated indicating that there is electrical equipment inside of it.

Meanings of pictograms on the label

Rated voltage: 230 V~50Hz

Rated current: 40 A



Rated power: 9 kW



Short-time withstand current: 60 A



Net weight: 3,7 kg

Size: 240×240×130 mm

Insulation: IP20





Pollution degree (EN IEC 60947-1): 3

Box material: Metal




Ambient temperature: -20°C ~ +40°C Atmospheric humidity (EN IEC 60947-1):

Max. 50% at +40°C/ or 90% at +20°C

	Read the user's manual before using the product.
	The product meets the respective EU harmonisation legal directives.
	The product is intended only for indoor use. Protect against rain and the ingress of water.
	According to Directive (EU) 2012/19, unusable electrical appliances must not be thrown out with communal waste since they contain substances that are hazardous to the environment, but rather must be handed over for ecological disposal at an electrical equipment waste collection point. You can find information about electrical equipment collection points and collection conditions at your local town council office or at your vendor. Throw packaging materials into a container for the respective sorted waste.



Documents / Resources

	<p>HERON 8898141 Automatic Transfer Switch Unit [pdf] User Manual</p> <p>8898141, 8898141 Automatic Transfer Switch Unit, Automatic Transfer Switch Unit, Transfer Switch Unit, Switch Unit, Unit</p>
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References

- [E | Extol.cz](#)
- [E EXTOL - náradie pre remeselníkov, domácich majstrov aj profesionálov](#)
- [HERON Elektrocentrály a motorová čerpadla](#)
- [HERON Elektrocentrály a motorová čerpadla](#)
- [Köszöntjük a Madal Bal cégcsoportnál!](#)
- [User Manual](#)

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