



# User Manual

Code: SP-KIT-4X160/2X80/MPPT-LCD  
SOLAR KIT **SP-KIT-4X160/2X80/MPPT-LCD** 1730 Wh

## Warning!

Please read the user manual included in this work as it contains important information related with safety of installation and use of the device.

Only persons who read the user manual may use the device.

The user manual must be kept because it may be required in the future. The device is to be used exclusively for purposes specified in this user manual.

The device must be unpacked prior to starting-up. After removing the packaging make sure the device is in working order.

If the product has defects, it should not be used until it is repaired.

The product is intended for use at home and commercial use and may not be used for other than intended use.

The manufacturer is not liable for damages resulting from not adhering to the rules contained in the user manual, therefore, we recommend to follow the aforementioned safety rules for operation and maintenance of the device. In this way you will ensure yourself safety and avoid causing damage to the device.

The manufacturer and the supplier are not liable for losses or damages arising out of the product, including financial or intangible losses, loss of profits, income, data, pleasure from use of the product or other products related with it - indirect, incidental or consequential loss or damage. The above provisions apply whether the loss or damage concerns:

1. Deterioration of quality or the lack of operation of the products or products related with it due to damage as well as the lack of access to the product when it is undergoing repair, which results in stoppage the loss of user's time or a break in business activity;
2. Improper results of operation of the product or products related with it;
3. It applies to losses and damages according to any legal category, including negligence and other losses, termination of a contract, expressed or implied guarantee and strict liability (even if the manufacturer or the supplier was notified about the possibility of occurrence of such damages).

### Safety measures:

Particular attention at designing was directed to quality standards of the device where ensuring safety of operation is the most important factor.

The device must be secured against contact with caustic, staining and viscous fluids.

The device was designed in such a way that it restarts operation when power supply is restored after a break.

**Attention! We recommend using protections to further protect the device from possible overvoltages in installations. Surge protectors are effective protection against accidental pass to the device voltages higher than the rated. Damages caused by pass the voltages higher than specified in manual, are not under warranty.**

Turn off the device before transporting it.

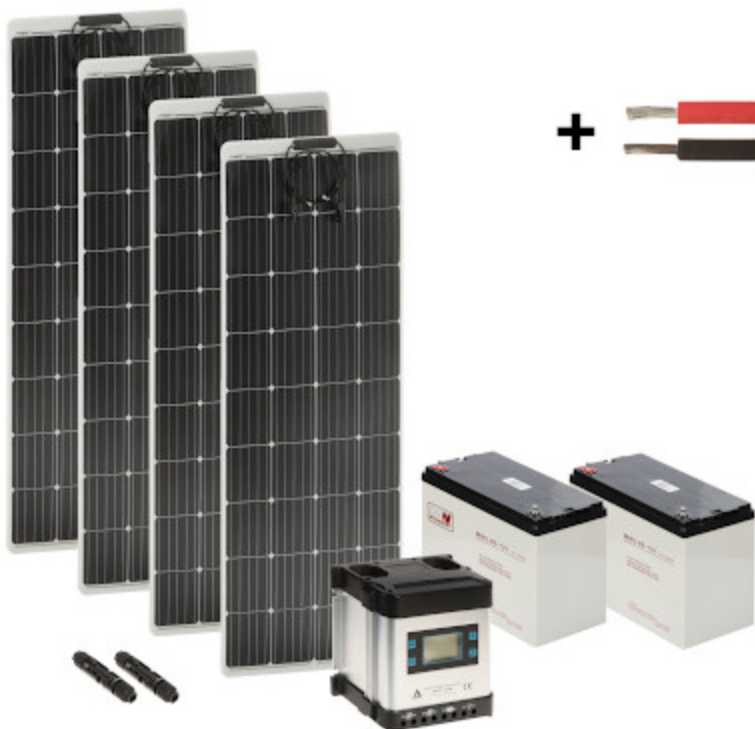
Prior to connecting the device to a power source check whether the supplied voltage is consistent with rated voltage specified in the user manual.

### Proper product disposal:

A marking of a crossed out waste bin indicates that the product may not be disposed together with other household waste in the entire EU. To avoid possible damage to the natural environment of health due to uncontrolled waste disposal, therefore, it should be handed over for recycling, propagating in this way sustainable use of natural resources.

To return a worn-out product, use a collection and disposal system of this type of equipment or contact a seller from whom it was purchased. He will then be recycled in an environmentally-friendly way.

The SP-KIT-4X160/2X80/MPPT-LCD kit was selected for owners of camper-vans, caravans or holiday homes without access to the power grid. The kit consists of 4 solar panels with a power of 160W each, a charging controller, 2 batteries with a capacity of 80Ah each and connection cables with connectors.



In the kit:	<ul style="list-style-type: none"> <li>• 4 solar panels 160 W,</li> <li>• 2 batteries 80 Ah,</li> <li>• Solar Charge Controller - 20 A, MPPT,</li> <li>• Connecting cables : 2 x 10 m,</li> <li>• MC4 connectors - 2 pcs</li> </ul>
Theoretical daily energy production (for Poland):	1730 Wh
Guarantee:	2 years

#### Solar Panel:

Maximum power:	160 W
Maximum Power Current ( $I_{mp}$ ):	8.79 A
Maximum Power Voltage ( $V_{mp}$ ):	18.2 V
Short-circuit Current ( $I_{sc}$ ):	9.31 A
Open-circuit Voltage ( $V_{oc}$ ):	21.5 V
Length of the cables:	2 x 0.65 m
Cell Type:	Monocrystalline
Panel Structure:	Flexible
Weight:	5.16 kg
Dimensions:	1510 x 670 x 15 mm

#### Solar Charge Controller:

Regulation Type:	MPPT
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Rated voltage:	12 / 24 V
Rated current:	20 A
Input voltage:	20 ... 60 V for 12 V battery 30 ... 90 V for 24 V battery
Battery charging current:	max. 20 A
Load Current:	max. 20 A
Main features:	<ul style="list-style-type: none"><li>• The device is designed to charge AGM and gel batteries only,</li><li>• LCD display,</li><li>• LED diodes indicating the device operation status</li></ul>
Weight:	1.41 kg
Dimensions:	177 x 175 x 93 mm
Manufacturer / Brand:	AZO Digital

## Battery:

Battery capacity:	80 Ah
Rated voltage:	12 V
Battery charging current:	max. 24 A
Battery type:	Maintenance-free AGM (Absorbent Glass Mat) battery
Battery lifetime:	10 ... 12 years
Weight:	23.4 kg
Dimensions:	350 x 167 x 174 mm

## Connecting cable:

Inner conductor:	4.0 mm <sup>2</sup> - Stranded wire Cu - Tin-plated
Rated voltage:	600 V / 1000 V AC 1800 V DC
Outer coating:	Ø 5.0 mm - Non-halogen plastic
Main features:	<ul style="list-style-type: none"><li>• UV radiation resistance</li><li>• Ozone resistance</li><li>• Hydrolysis resistance</li><li>• Resistant to oils and aggressive chemicals</li><li>• Flame resistance (according to VDE 0482-332-2, DIN EN 60332-1)</li><li>• The insulating layer is made of halogen-free material, which does not produce aggressive fumes during combustion</li><li>• Increased mechanical strength of the outer coating</li><li>• Expected lifetime : 25 years</li></ul>

## MC4 connector:

Connector type:	MC4 - set (M + F) / Crimping
Rated voltage:	1000 V
Rated current:	30 A
Material:	Plastic + Metal
Color:	Black
Application:	Solar installations

"Index of Protection":	IP67
Flammability class:	UL94-VO
Weight:	0.022 kg
Dimensions:	Ø 19 x 87 mm

Solar Panel:



Solar Charge Controller:



Connectors:



Battery:



MC4 connector:



PACKAGE

Dimensions (L x W x H): 0x0x0 mm	Gross Weight: 0 kg
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