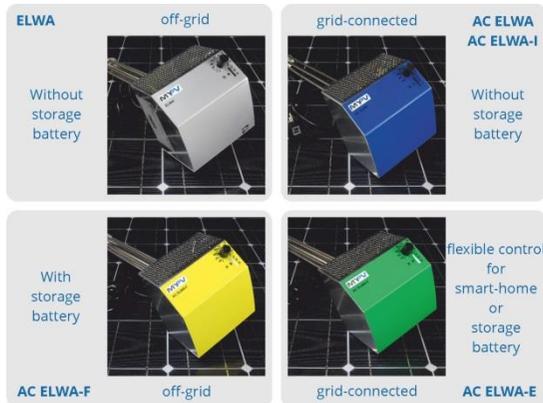


System documentation

ELWA® Products and Accessories



About the document

This system documentation provides an overview of the compatibility of the my-PV products. Our portfolio is undergoing continuous development and is constantly being extended. Access detailed product information at any time on www.my-pv.com.

Click on the numbers to go directly to the respective description:

	AC ELWA	AC ELWA-E	AC ELWA-F	PLA	ELWA
PLA	1				
Universal interface	2	2	2		
USB interface	3	3	3	4	5
Modbus meter interface for AC ELWA-E		6			
Modbus interface for ELWA					7

1 PLA with AC ELWA

Function

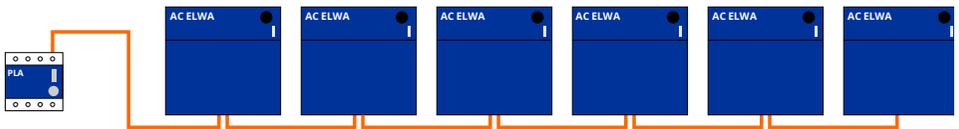
The PLA 3-phase measurement controller measures the load flow of the building between the fuses located after the meter and the consumer circuits, and thus calculates whether there is an energy excess. If this is the case, it activates the AC ELWA and gives it the power to be converted, which is then used for generating heat.

The AC ELWA is controlled by the PLA via AC ELWA Link.

With a PLA, up to 6 EC ELWAs can be operated simultaneously in stratified charging mode or synchronous mode.

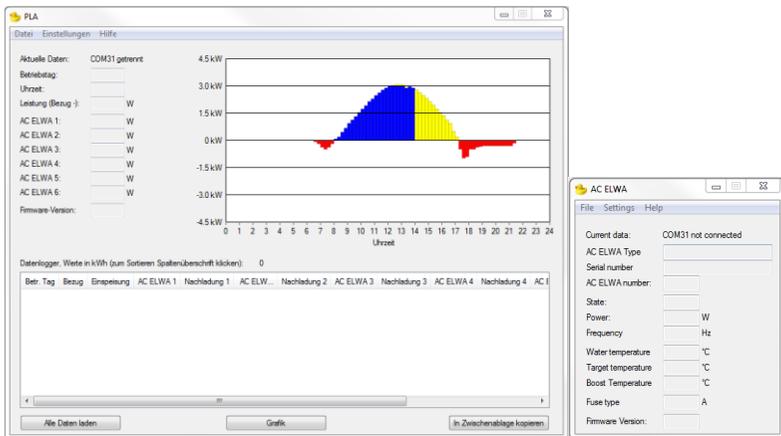
 With the PLA it is only possible to connect to the AC ELWA. All other AC devices (AC ELWA-E / AC ELWA-F) are controlled in other ways!

Wiring diagram



The PLA is connected to up to 6 AC ELWAs with a single-core cable. This can be fed through the normal pipework used for the AC cabling.

Software (only together with a USB interface)



The software of the PLA 3-phase measurement controller (left-hand image) acts as an interface to the data logger within the PLA. In addition to the data analysis, this can also be used to adjust the time and boost time, as well as to select between stratified and synchronous charging if several AC ELWAs are used.

The AC ELWA software (right-hand image) provides a simple overview of the current status of the device and the selected parameters. These are very easy to adjust under "Settings". These include the device number, the boost temperature and the circuit fuse. These parameters can also be adjusted manually using the rotary knob.

2 Universal interface for AC ELWA / AC ELWA-E / AC ELWA-F

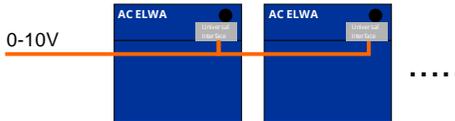
Function

The Universal-Interface can be used if the AC ELWAS are controlled by an external device rather than a PLA. Various protocols may be used for communication.



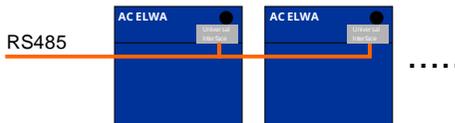
The voltage to the individual interfaces is supplied via a 24 V connection or the supplied mains adapter plug!

Wiring diagram for 0-10 V



The first option is for an external provider to control the device via a 0-10 Volt signal. Several AC ELWAs can be controlled in parallel this way. A 2-core cable is used to connect directly to and between the interfaces.

Wiring diagram for RS485



The second option is to use RS485 control commands. Bus operation also allows the individual control and querying of several devices. It is therefore possible to read the device status and water temperature, for example. A 2-core cable is used to connect directly to and between the interfaces.

Documentation of the RS485 commands is included in the manual of the Universal-Interface!
[Get the documentation here](#)

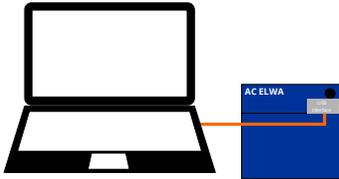
3 USB interface for AC ELWA / AC ELWA-E / AC ELWA-F

Function

For the devices of the AC series, the USB interface is used to adjust the device parameters and update the device firmware. To do so it establishes the connection between a Windows PC and the IR interface on the AC ELWA. A licence-free “Virtual COM Port Driver” from FTDI® must be installed for it to operate on the PC.

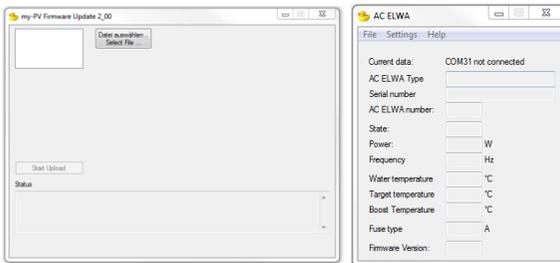
 The interface is supplied with voltage via the USB connection!

Wiring diagram



The laptop is connected directly to the interface via a USB cable.

Software



The firmware update software (left-hand image) can be used to transfer the new firmware to the device once the COM port and firmware file have been selected.

The AC ELWA software (right-hand image) provides a simple overview of the current status of the device and the selected parameters. These are very easy to adjust under “Settings”. These include the device number, the boost temperature and the circuit fuse. These parameters can also be adjusted manually using the rotary knob.

4 USB interface for PLA

Function

For the PLA, the USB interface is used to read the data loggers in the PLA, adjust the operational parameters and update the device firmware. To do so, it establishes the connection between a Windows PC and the IR interface on the PLA. A licence-free "Virtual COM Port Driver" from FTDI® must be installed for it to operate on the PC.

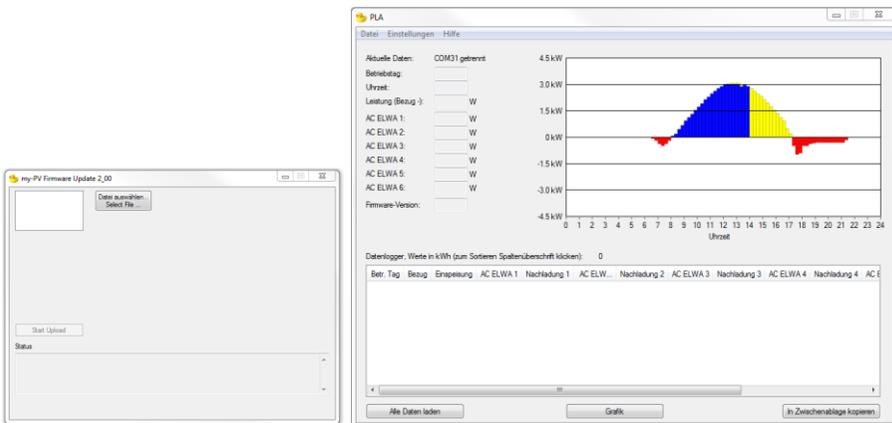
 The interface is supplied with voltage via the USB connection!

Wiring diagram



The laptop is connected directly to the interface via a USB cable.

Software



The firmware update software (left-hand image) can be used to transfer the new firmware to the device once the COM port and firmware file have been selected.

The software of the PLA 3-phase measurement controller (right-hand image) acts as an interface to the data logger within the PLA. In addition to the data analysis, this can also be used to adjust the time and boost time, as well as to select between stratified and synchronous charging if several AC ELWAs are used.

5 USB interface for ELWA

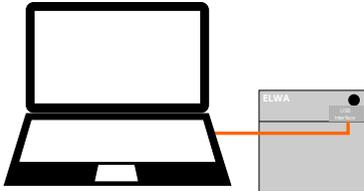
Function

For the ELWA, the USB interface is used to read the data loggers in the ELWA, adjust the operational parameters and update the device firmware. To do so, it establishes the connection between a Windows PC and the IR interface on the ELWA. A licence-free “Virtual COM Port Driver” from FTDI® must be installed for it to operate on the PC.



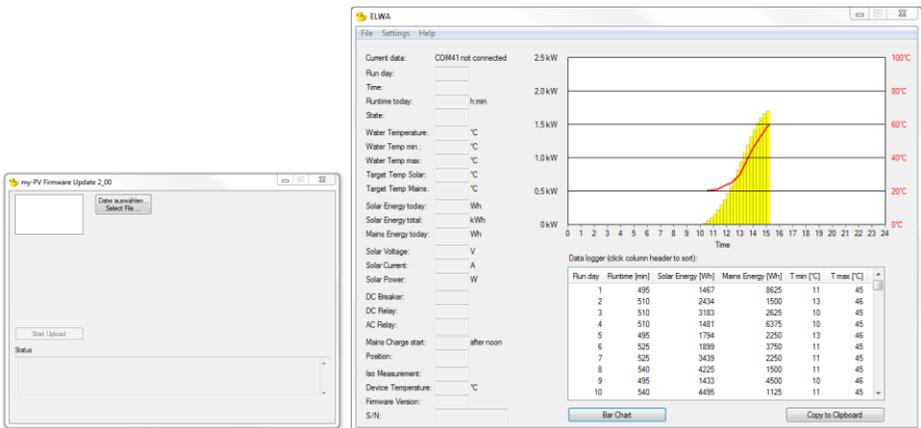
The interface is supplied with voltage via the USB connection!

Wiring diagram



The laptop is connected directly to the interface via a USB cable.

Software



The firmware update software (left-hand image) can be used to transfer the new firmware to the device once the COM port and firmware file have been selected.

The ELWA software (right-hand image) acts as an interface to the data logger within the ELWA. In addition to the data analysis, this can also be used to adjust the time and target temperature for boosting the hot water supply, as well as to select between devices during the stratified charging with two ELWAs.

6 Modbus meter interface for AC ELWA-E

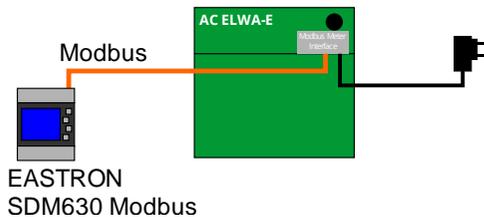
Function

In the event that a battery or a Smart Home system is only installed at a later point in time, but the AC ELWA-E is already to be commissioned, the Modbus meter interface is used as a temporary solution. It acts as a gateway between the AC ELWA-E and the EASTRON SDM630 Modbus energy measurement device. This determines the extent of the excess capacity.

 The voltage to the interface is supplied via a 24 V connection or the supplied mains adapter plug!

 The EASTRON SDM630 is not part of the my-PV product portfolio. The company is not a distributor either!

Wiring diagram



A 2-core cable is used to directly connect the meter and the interface.

Software

None.

 Special my-PV software modules are available for integrating the AC ELWA-E into Loxone Config. We would be happy to help you with the technical implementation as required. The “Loxone Package” is available on www.my-pv.com!

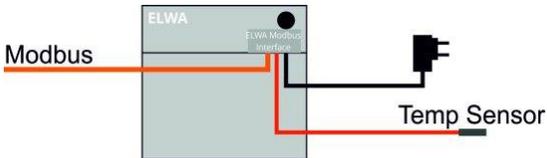
7 Modbus interface for ELWA

Function

With the Modbus interface, one or more ELWAs can be controlled and monitored remotely. It also makes it possible to connect an additional temperature sensor within the controller.

 The voltage to the interface is supplied via a 24 V connection or the supplied mains adapter plug!

Wiring diagram



A 2-core cable is used to directly connect the building technology controller and the interface.

An additional 2-pole temperature sensor can be connected directly to the interface.

Software

None.

Additional information



Access detailed product information at any time on www.my-pv.com



my-PV organises regular, free webinars on the products and their applications. A calendar of the planned dates can be found on the homepage.



We would be happy to send you a current price list for our products. Simply send an email to info@my-pv.com



We would also be happy to send you detailed descriptions of already completed projects on request. Simply send an email to info@my-pv.com

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