

# INSTALLATION INSTRUCTIONS FOR THE PLANNING AND INSTALLATION OF A SOLARFOX<sup>®</sup> DISPLAY

The following information will provide a brief overview for installing a Solarfox<sup>®</sup> displays. The instructions are aimed particularly at installers and planners.

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## 1. Time and cost estimate

The following calculation helps you calculate the cost of installing a Solarfox<sup>®</sup> display and plan. The following calculation assumes that electricity and network connection (LAN or WLAN) are already available at the installation location.

Operation	Time
1) Drill four holes and attach the anchor	ca. 10 min
2) Installation of the wall mount plate	ca. 5 min
3) Installation of the display and connection of the power and LAN cables	ca. 5 min
4) Registration of the display under <a href="http://setup.solar-fox.com">http://setup.solar-fox.com</a> (it should be performed on any computer via the Web form even before installation) the access data is immediately sent to you from the system via email.	ca. 5-10 min
5) Implementation of display setup and configuration of the Solarfox <sup>®</sup> display using a USB keyboard	5 min
<b>Summe</b>	<b>ca. 30-35 min</b>

For a quick and smooth installation and commissioning of the Solarfox<sup>®</sup> display we recommend an installation in advance to coordinate all necessary information with the IT managers (Administrator). To do this, use our Checklist (point 11). This ensures that an Internet connection and all the necessary data are available on site.

## 2. Work steps

For the installation of a Solarfox<sup>®</sup> display we recommend the following steps:

- 1) Registration of the display under <http://setup.solar-fox.de> with the serial number
- 2) Preparation of the connections to the installation location
- 3) Installation of the display
- 4) Configuration of the display
- 5) User can access the online management of the display from any computer with Internet access

### 3. Assembly variants in indoor and outdoor applications

- I) On-site installation options for indoor Solarfox<sup>®</sup> SF-300 displays:
- (1) Wall mounting by a tilting wall mount (included)
  - (2) Ceiling mounting using a ceiling mount (accessory)
  - (3) Two leg or one leg stand foot - height 180 cm (accessory)
  - (4) Stands for display placement E.g. shelf or sideboard (accessory)
  - (5) Installation in a window - with ceiling or floor stand (accessory)
  - (6) Mounting with a swivel holder which can be adjusted horizontally and vertically (accessory)
- II) On-site installation options for outdoor Solarfox<sup>®</sup> SF-400 displays:
- (1) Wall mounting with wall holder (optional 0 ° or 15 ° angle of inclination)
  - (2) Display orientation: East, West, North, (southern exposure only with shading)

### 4. Connectors

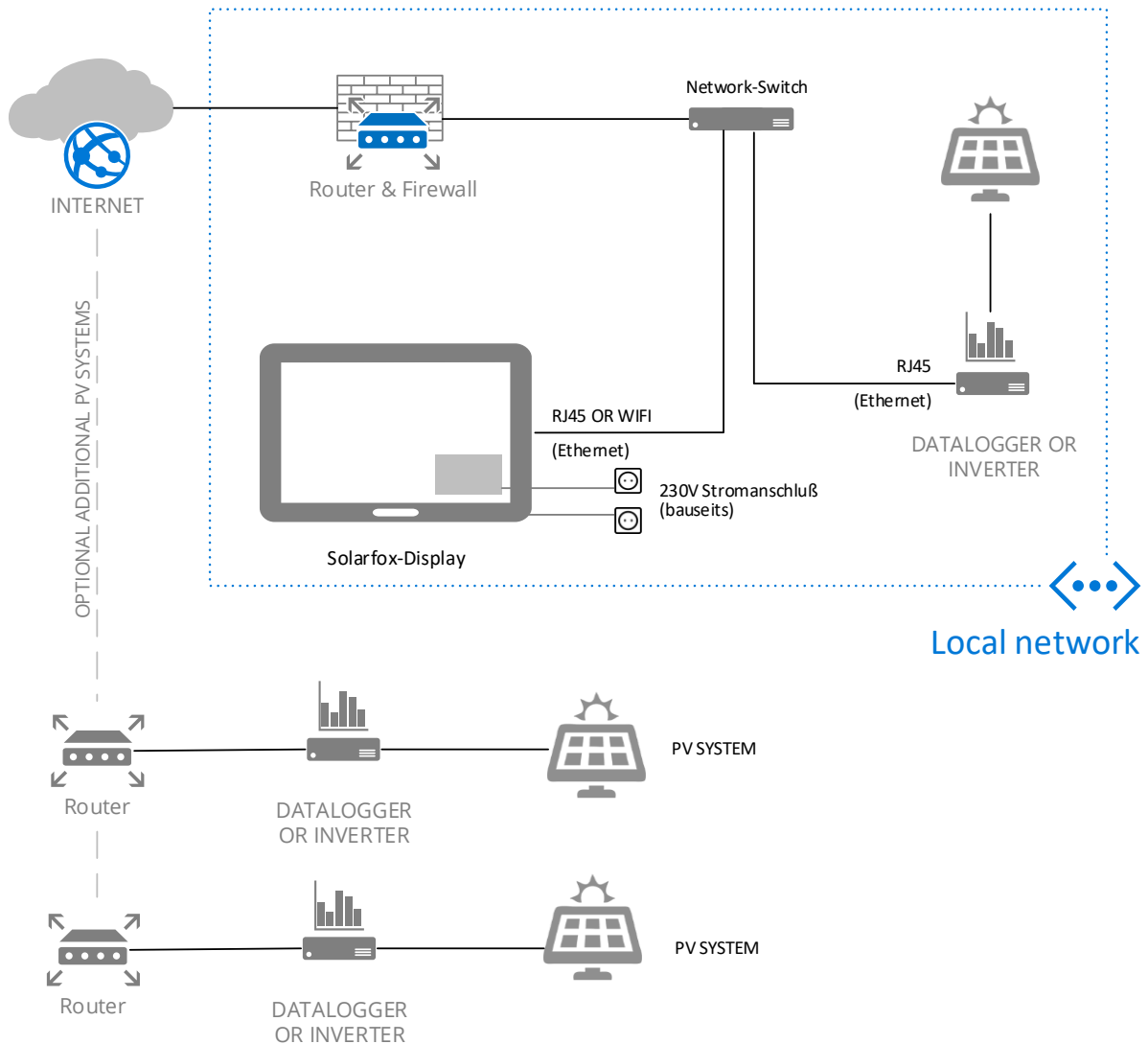
- 2 x power socket (230V) (It is also possible to use a multiple socket outlet)
- 1 x RJ45 network (Ethernet) connection (cable: CAT5e)

Instead of a network connection via Ethernet cable, it is possible to use a Wi-Fi network. To do this, Solarfox<sup>®</sup> offers an optional WLAN stick with an antenna.

Alternatively, a UMTS router can also be used for a mobile radio connection. A flat rate is required. The traffic depends on the content and the refresh rate of your slideshow. We recommend therefore a flat rate or a rate with 1-2 GB volume. (Please check reception quality on the spot!)

The sockets can be provided behind the display in an outlet area of the wall bracket, we recommend two lower wall sockets. The recess is to install sufficient to the sockets in this way invisible to the wall or behind the display. On the spot only a wall outlet or power supply connection should exist, the second line can be powered using a standard extension (PDU).

## Connection plan Solarfox<sup>®</sup> display (example)



The data connection to the photovoltaic system is always done via the Web interface. By so doing, you are completely independent of location and very flexible as well. (See section 5)

## 5. Data communication and network integration

An Internet connection is required for the operation of the Solarfox<sup>®</sup> display. In order to do this, the display gets of yield data from the Solarfox<sup>®</sup> Web server at regular intervals. You will find below all information that are important for the data connection in company or agency networks. Please ensure a corresponding port forwarding or port sharing for the listed IP addresses. Other firewall rules are not required. There is only a data retrieval. A data upload is not on the device. If you change the display content is the data modification on the part of the Web server. The Solarfox<sup>®</sup> display gets data from the Internet or from the Solarfox<sup>®</sup> Web server only. This ensures high reliability.

Information for the network integration	
<b>Network:</b>	LAN, WLAN, UMTS (3G)
<b>Connectivity:</b>	Dynamic IP-Address (DHCP) or static IP-Address
<b>URL:</b>	show.solar-fox.com
<b>IP:</b>	212.224.82.131 (Solarfox <sup>®</sup> Slideshow 2.x) 212.224.82.132 (Solarfox <sup>®</sup> Slideshow 2.x - Status) 212.224.82.155 (Solarfox <sup>®</sup> Update Service - Firmware)
<b>Port:</b>	80, 443
<b>Proxy server:</b>	optional

## 6. Checklist

### Checklist for installing Solarfox<sup>®</sup> display systems

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The following checklist can be used to clarify important framework data, requirements and questions in advance before installing a Solarfox<sup>®</sup> display.

Date:	
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#### 1) General information about the property / building:

Name of the property:	
Property number:	
Street:	
Postal code and city:	
Contact person:	
Tel:	
E-Mail:	

#### 2) Information about existing connections for the Solarfox<sup>®</sup> display

	Yes	No
Is there a possibility of accessing the Internet? (LAN/WLAN/etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Does it consist of a power connector with 2 Sockets at installation?	<input type="checkbox"/>	<input type="checkbox"/>

#### 3) Data supervision / monitoring

What energy sources should be visualized? What data loggers / counters are available?

Renewable energy system (PV, wind, cogeneration, etc.)	Power kW
Photovoltaic system:	

#### 4) Installation of display and data logger

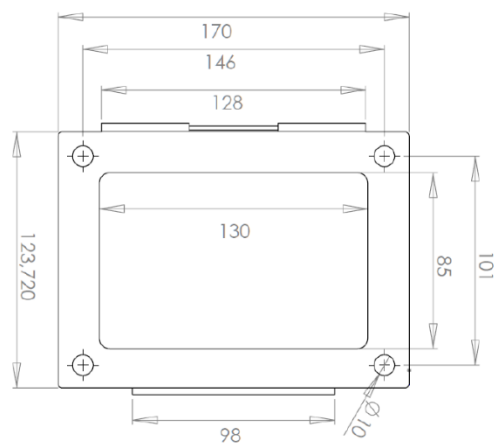
	Yes	No
Has a data logger / monitoring already been installed?	<input type="checkbox"/>	<input type="checkbox"/>
Does the data logger transfer data on the Internet already?	<input type="checkbox"/>	<input type="checkbox"/>
Which data logger or monitoring system is concerned?		

## 7. Technical specification for wall mounting and dimensions

### Wall panel's wall mount for Solarfox<sup>®</sup> SF100 / SF-300 24" and 32"

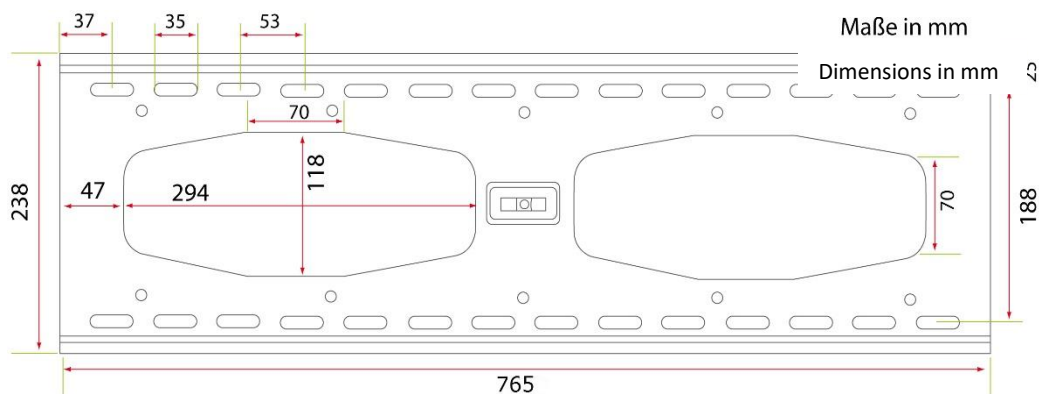
The carrier plate is wall mounted and then holds on the display with the inclinable carrier. Please select the appropriate screws and anchors for your wall (Please pay attention to the weight (see table). These are not included in delivery.

The compact dimensions of the wall mount allows for an easy and flexible installation of electrical outlets in the side portion of the mount and thus behind the display, so that they are no longer visible after the display assembly.



### Wall plate's wall mount for Solarfox<sup>®</sup> SF-300 43" to 65"

The carrier plate is wall mounted and then holds the display with inclinable carriers. Please select the appropriate screws and anchors for your wall. Please pay attention to the weight (see table). These are not included in delivery. Flush sockets (1 x LAN, 2 x 230 V) can be placed in the two middle free surfaces.



### Solarfox<sup>®</sup> SF-100 Serie: display dimensions and weight

Display	Length	Width	Depth without Wall mount	Depth with Wall mount	Weight
<b>SF-100 24"</b>	554 mm	332 mm	59 mm	79 mm	3,5 kg
<b>SF-100 32"</b>	740 mm	435 mm	84 mm	135 mm	6,5 kg

### Solarfox<sup>®</sup> SF-300 Series: display dimensions and weight

Display	Length	Width	Depth without Wall mount	Depth with Wall mount	Weight
<b>SF-300 24"</b>	554 mm	332 mm	59 mm	79 mm	3,6 kg
<b>SF-300 32"</b>	729 mm	429 mm	56 mm	104mm	6,8 kg
<b>SF-300 43"</b>	970 mm	564 mm	39 mm	92 mm	12,4 kg
<b>SF-300 49"</b>	1102 mm	636 mm	39mm	89 mm	17,3 kg
<b>SF-300 55"</b>	1238 mm	715 mm	38,6 mm	97 mm	19,2 kg
<b>SF-300 65"</b>	1457 mm	838 mm	41 mm	90 mm	31,2 kg
<b>SF-300 75"</b>	1682 mm	960 mm	58 mm	108 mm	45,5 kg

### Solarfox<sup>®</sup> SF-400 Series: display- dimensions and weight

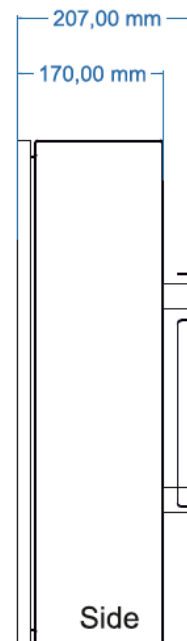
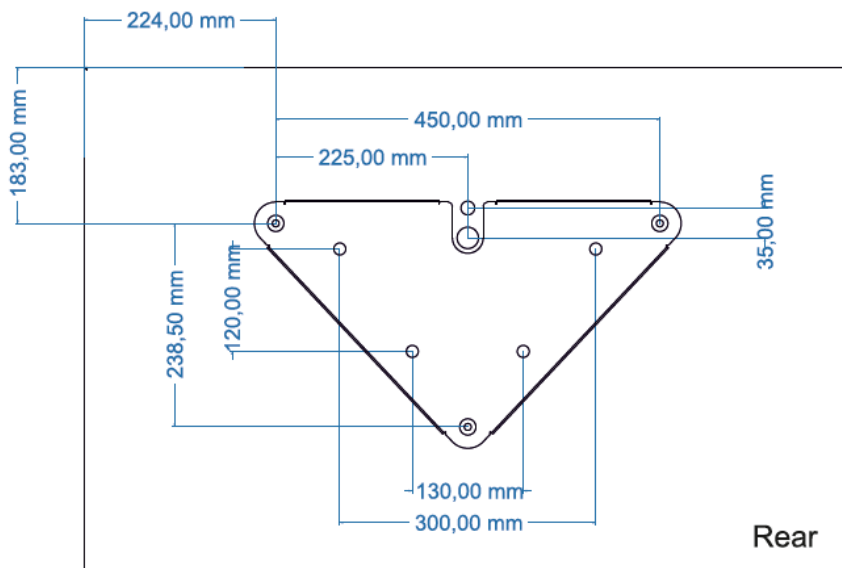
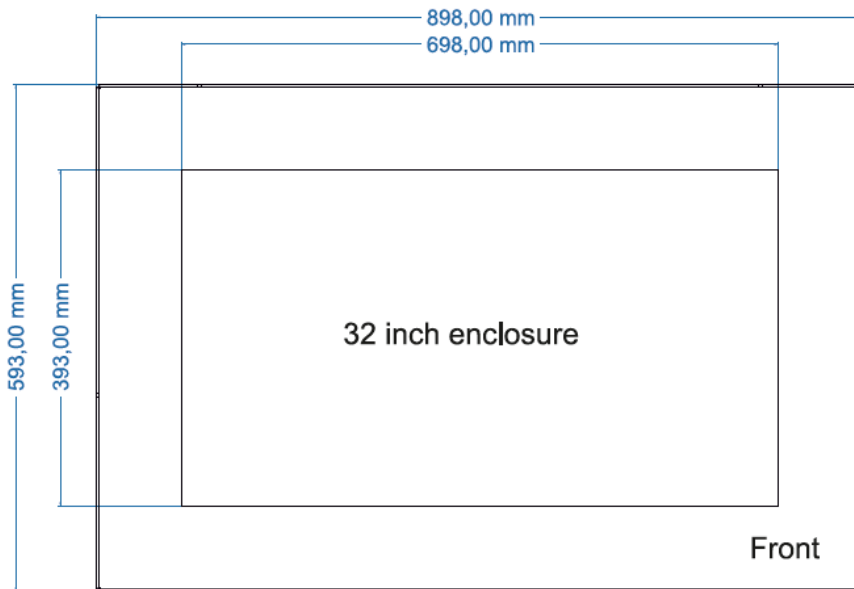
Display	Length	Width	Depth without Wall mount	Depth with Wall mount *	Weight
<b>SF-300 32"</b>	898 mm	592 mm	170 mm	274 mm	31,8 kg
<b>SF-300 42"</b>	1141 mm	729 mm	170 mm	274 mm	52,4 kg
<b>SF-300 55"</b>	1410 mm	880 mm	170 mm	285 mm	74,2 kg

\* The fan covers are also attached on the back. These have the same depth as the wall mountings but are not shown in the drawings below. They each put 40 mm at the top left and right.

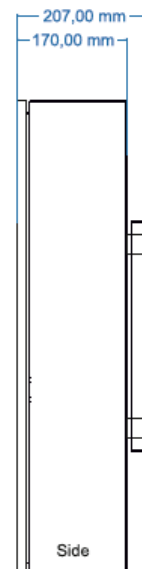
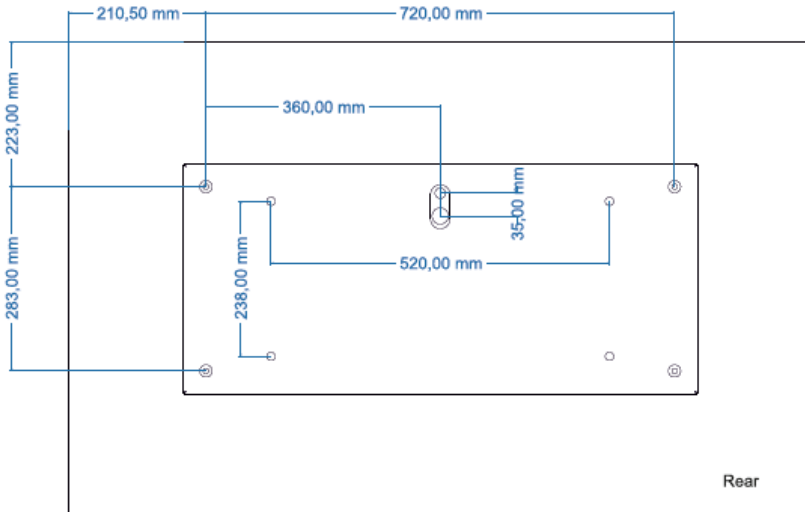
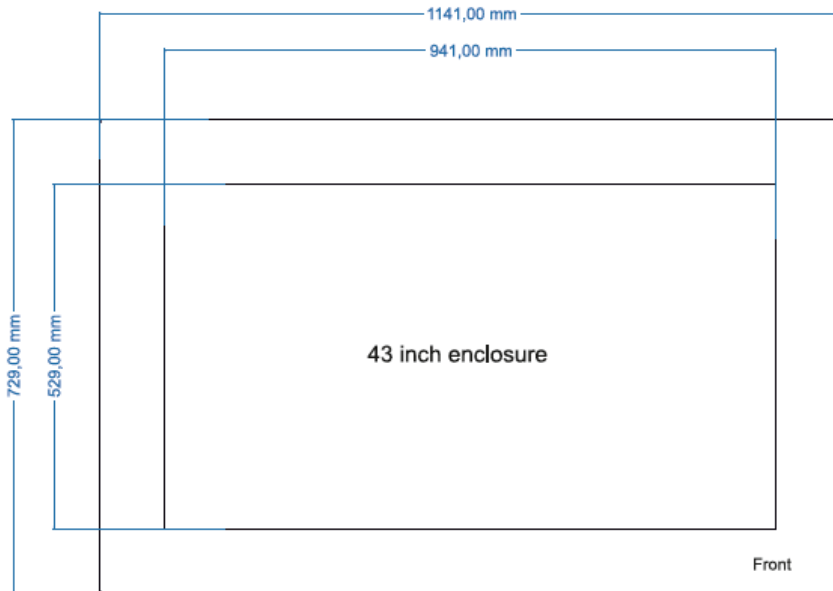
**Caution:** In case you plan to place the display on a wall, you should check the exact dimensions once again with our sales. Due to model changes, slight deviations of components may occur temporally.



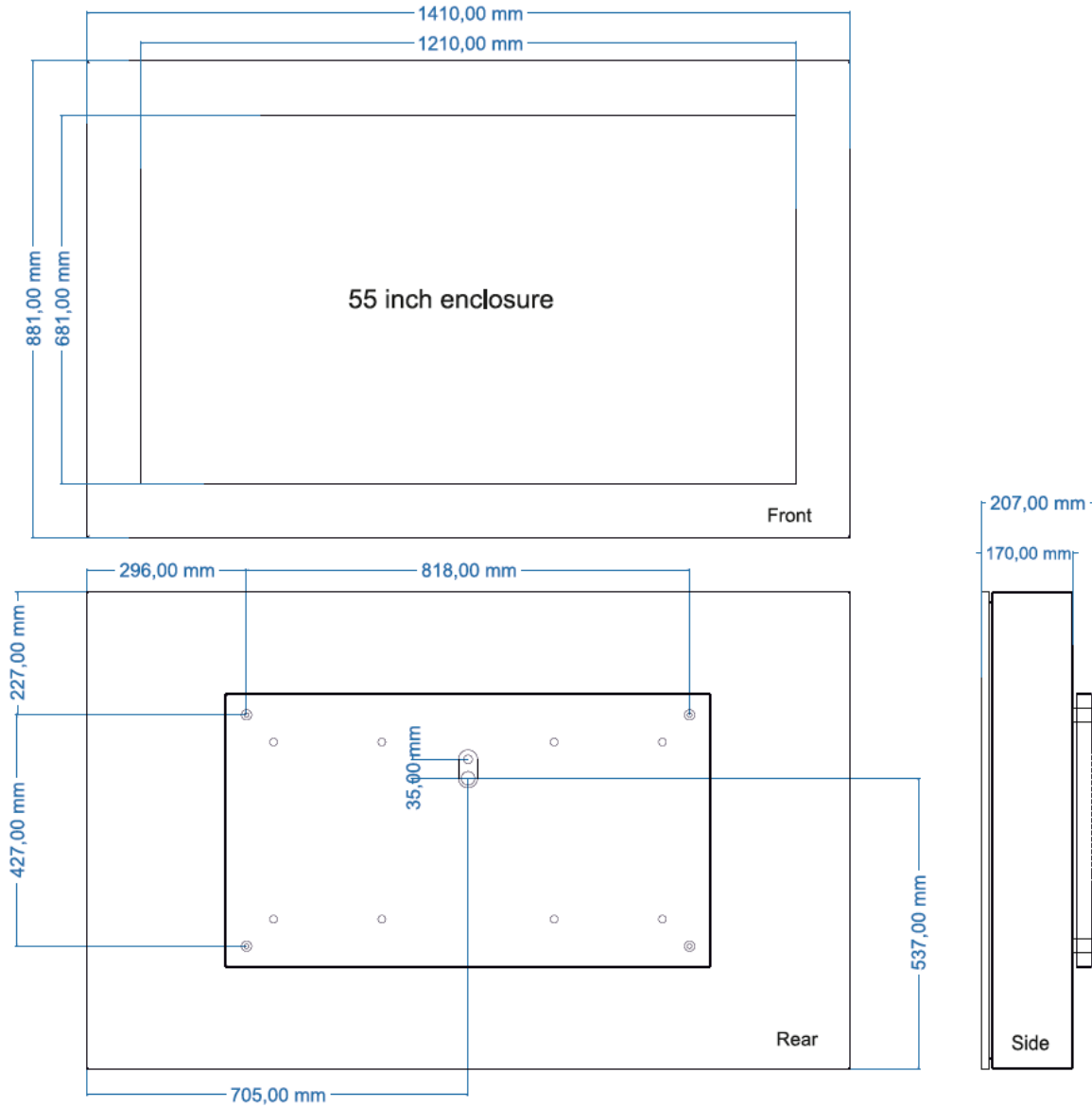
Technical drawing: SF-400 32" (Outdoor-Serie)



Technical drawing: SF-400 43" (Outdoor-Serie)



Technical drawing: SF-400 55"



## 8. Interfaces / compatible monitoring systems version: 03-2018

Manufacturer	Datalogger / Monitoring system	Interface via webportal / Internet / http	Interface via FTP	Interface via email-push
ABB / Power One	All types	<input checked="" type="checkbox"/>		
Advanced Energy	All types	<input checked="" type="checkbox"/>		
AS Solar / Enerserve	AS Portal / Enerserve Portal	<input checked="" type="checkbox"/>		
be4energy	be4unity, be4vision	<input checked="" type="checkbox"/>		
Benning Solar	Monitoring Portal	<input checked="" type="checkbox"/>		
CC Log	Monitoring Portal	<input checked="" type="checkbox"/>		
Danfoss GmbH	Danfoss ComLynx Datalogger (All types)		<input checked="" type="checkbox"/>	
Ecodata GmbH PowerDog	All types	<input checked="" type="checkbox"/>		
Enerserve	e.manager	<input checked="" type="checkbox"/>		
Enphase Energy	Enphase Monitoring Portal	<input checked="" type="checkbox"/>		
E3/DC	E3/DC Portal	<input checked="" type="checkbox"/>		
Fronius International GmbH	Fronius Datalogger Web	<input checked="" type="checkbox"/>		
GreenPowerMonitor	GreenPowerMonitor Platform	<input checked="" type="checkbox"/>		
Growatt	Growatt Monitoring Portal (All types)	<input checked="" type="checkbox"/>		
GoodWe	Goodwe Monitoring Portal (All types)	<input checked="" type="checkbox"/>		
Huawei	Huawei (alle Modelle)		<input checked="" type="checkbox"/>	
IBC SOLAR AG	IBC Solar SolControl (All types)	<input checked="" type="checkbox"/>		
KACO new energy GmbH	Powador proLOG (All types)	<input checked="" type="checkbox"/>		
KOSTAL Solar Electric GmbH	Kostal PIKO (All types)	<input checked="" type="checkbox"/>		
Mage Solar AG	Mage Securtec (All types)	<input checked="" type="checkbox"/>		
Meier-NT	ADL-MXS ADL-MXSmini		<input checked="" type="checkbox"/>	
Meteocontrol GmbH	Web'log (All types)	<input checked="" type="checkbox"/>		
Oelmaier Technology GmbH	Oelmaier logPAC (All types)		<input checked="" type="checkbox"/>	
POWER ONE / ABB	POWER-ONE Aurora CDD	<input checked="" type="checkbox"/>		
PVOutput	Monitoring Portal	<input checked="" type="checkbox"/>		
QOS Energy	Quantum <sup>®</sup> web platform	<input checked="" type="checkbox"/>		
REFUsoL GmbH / Advanced Energy	REFUlog (All types)	<input checked="" type="checkbox"/>		
relatio RT Süd GmbH	Relatio fieldLog (All types)	<input checked="" type="checkbox"/>		
SAJ Solar	All types	<input checked="" type="checkbox"/>		
Schueco Sunalyzer	Schueco Sunalyzer Web PR		<input checked="" type="checkbox"/>	
SENEC	All types	<input checked="" type="checkbox"/>		
Siemens AG	Siemens Sinvert PVM 17	<input checked="" type="checkbox"/>		
Skytron Energy GmbH	Skylog	<input checked="" type="checkbox"/>		

SMA AG	Sunny Portal (All types)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Smart 1	Smart 1 (All types)	<input checked="" type="checkbox"/>		
Smartblue AG	Smart Control Portal	<input checked="" type="checkbox"/>		
Solar Edge	Monitoring Portal	<input checked="" type="checkbox"/>		
Solare Datensysteme GmbH	Solar-Log (All types)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Solarmax	Solarmax MaxWeb XP			<input checked="" type="checkbox"/>
Solarworld AG	Solarworld Suntrol Datalogger		<input checked="" type="checkbox"/>	
Sonnenbatterie	Monitoring Portal	<input checked="" type="checkbox"/>		
Sunways AG	Sunways (All types)	<input checked="" type="checkbox"/>		
SynaptiQ / 3E	Monitoring Portal	<input checked="" type="checkbox"/>		
Tigo Energy	Monitoring Portal	<input checked="" type="checkbox"/>		
Zeversolar	Monitoring Portal	<input checked="" type="checkbox"/>		

**Attention:** All Solarfox<sup>®</sup> data interface are basically free of charge. There are running costs or fees by Solarfox<sup>®</sup>. Portal operators for monitoring expenses depending on the manufacturer and portal. However, this does not affect the Solarfox<sup>®</sup> displays. Solarfox<sup>®</sup> does not charge any ongoing portal fees.

## 9. Connection of old systems and photovoltaic systems with no data logger

In some cases, there is no connection point of the display on the photovoltaic system in the desired location or no data can be provided by the system. This can have the following reasons for example:

- 1) There is no data logger available
- 2) There is an old data logger without Internet available
- 3) The data logger is not fitted with an Internet connection
- 4) The data logger is the property of system operator and no data access allowed

In the case of the above mentioned constellations, the system data can be simulated also. In this case, Solarfox<sup>®</sup> draws on regional radiation values or plant data of a comparable plant and approximately calculates the yield of your system using an algorithm. Accordingly, we need only the plant size and alignment of the concerned units. Then the Solarfox<sup>®</sup> even without a connection to your system can approximately display the yield data. The deviation of income moves only in the lower single digits. The data can be adapted at any time but also in our system online identified deviations and edited.

## **10. Display commissioning with subsequent commissioning of the data source**

We recommend the installation or online registration of the Solarfox<sup>®</sup> display only after the data logger has been put into operation, and if the photovoltaic system has once had to transfer data. This speeds up the installation process. You can also independently register the Solarfox<sup>®</sup> display no data source and first unlock this without data source. Transitional can operate the display no data source or unlock a demo system and unhide.

## **11. Connection of additional systems and data sources**

After commissioning, you can add any more data sources to a Solarfox<sup>®</sup> display. You need only an appropriate data sources package, which must be unlocked. In this way, photovoltaic systems, wind power plants, CHP or other equipment can be added.

## **12. Timing and power saving feature**

Solarfox<sup>®</sup> displays have a built-in timer, which allows individual day at a certain time to turn on the display and turn off at a specified time. In this way the appliance can be adapted energy-efficient to the desired service life.

## **13. Maintenance**

If you are mounting the display on a ceiling or higher than 2 m, you should provide a USB extension cable. Connect it to the control computer and attach these in form coiled up behind the display. You can use them in case of a service for connecting a keyboard.

## **14. Warranty**

The warranty is 36 months. Depending on the warranty, a replacement or the processing by Pick-Up & return service is carried out. More information, please refer to our warranty conditions.