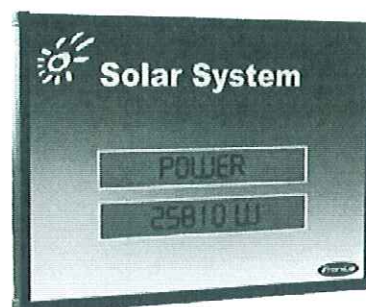


PV plants in the public arena are gaining increasing importance. You can professionally display your plant's most significant data using the FRONIUS IG Public Displays. For this you need an interface (plug-in card or box) for the PV plant and a suitable large-format display. As usual, all FRONIUS IG Public Displays are constructed on the plug & play principle. Just insert the plug-in card or box and any cables supplied, select the display values and away you go. We can supply:

FRONIUS IG PUBLIC DISPLAY



The FRONIUS IG Public Display: the complete package comprising interface and alphanumeric large-format display. All the values of the entire plant^{*)}, which can cover up to 100 inverters, can be selected for the rotating display. One value in the group is picked as the favourite and is then displayed every second time the value changes.

*) Following values can be displayed:

AC-Power – Total Energy – Energy/Day - Energy/Year
 CO2 Total - CO2/Year - CO2/Day
 Total Earnings – Earnings/Day – Earnings/Year - Date & Time

Values from installed Sensor Card/Box:

Module temperature / Irradiation / Ambient temperature

TECHNICAL DATA

| | |
|-------------------------------|--|
| Display indication | Alpha-numeric (2 lines with 8 characters each) |
| Design of the display | Fronius-specific (as shown on picture) |
| Dimensions | 650 x 450 x 50 mm (l x w x h) |
| Weight | 13 lbs |
| Connections | 2 x RJ45-connections for RS485-transmission |
| Protection class | NEMA 4 |
| Indication | LCD black on silver, reflective |
| Height of figures | 50 mm |
| Fronius Article-Number | 4,240,306 |

INSTRUCTION MANUAL

Large display GA-1000 / 2000 series

GA-1000 SERIES (LED-DISPLAY)

GA-2000 SERIES (LCD-DISPLAY)

Power supply voltage:

7,5 VDC

9 VDC

12 VDC

24 VDC

Please read before use!

This unit consists of sensitive electronic parts and is therefore to be protected from shock influence and sudden climate variations.

Be careful with the large display and don't push at the housing.

We have tried to make this manual complete and correct. If you find any mistakes please inform us.

We don't take any responsibility, guarantee or warranty if you don't use the large display in the recommended way.

All trademarks, mentioned in this document cover is taken, is property of the corresponding owner.

Don't open the housing or use anything to sting in it. Use only original-parts. Especially for the power supply unit. Separate the power supply unit from the net if you have finished work with the large display. Power supply only for indoor use!

Protect from high humidity (condensation) and high temperature. Indoor/outdoor use is depending on your order. Never use an indoor display outdoors.

Introduction

Congratulations to your decision to purchase this large display.

Please read this manual before use. We wish you good success with your new display.

Please contact us if you have any questions or you don't know exactly how to use the display.

Content

| | | page |
|-----|------------------------------|------|
| 1 | Connector and pin definition | 4 |
| 2 | Connection specifications | 4 |
| 2.1 | Impulse input | 5 |
| 2.2 | RS-485-input | 5 |
| 2.3 | RS-232-input | 5 |
| 3 | Preset | 6 |
| 4 | Technical data | 6 |

1. Connector and pin definition

The connection is described in the delivered specific connection paper !

Hints:

Cable:



The cable for power supply should have a cross section of at least 0,75 mm².



For the data cable (Impulse, RS-485, RS-232) you have to use a shielded cable in every case.

Shield:

The shield must be connected to 0 V (–) from power supply.

Interface:



ATTENTION: Large display may never be connected to more than 12 VDC.
Never connect direct to the 230 or 110 V net!



Take care for the right poles.

2. Connection specifications

- Verify all connections before power on the display.
- Switch on the data source before the large display.
- A failure in connection to the data source is shown as "-----" in the display (except impulse input).

2.1 Impulse

Passive impulse input (potential free contact). It is preset to 2000 l/kWh.
To configure the impulse rate, start value etc. please use the delivered software and cable for PC. The software shows help information.

For the connection you have to use a shielded cable (max. 100 m, there is a amplifier set available for longer cable).

2.2 RS-485

It is a save data transmission up to 600 m. You have to use a shielded cable. Don't guide the cable near strong consumers or high voltage cables.



Direct connection for Sunny Boy inverters (only one with integrated interface card), Control, Control Light or Control Plus (set control to **2400 Baud**)



The Sunny Boy Control has to be set to work with a large display and adjust there also type **HvG**.



Please see in the manual for inverter or control for more information, pins of the socket there and necessary adjustments.

2.3 RS-232

It is a save data transmission up to 15 m. You have to use a shielded cable. Don't guide the cable near strong consumers or high voltage cables.



Direct connection for Sunny Boy inverters (only one with integrated interface card), Control, Control Light or Control Plus (set control to **2400 Baud**)



The Sunny Boy Control has to be set to work with a large display and adjust there also type **HvG**.



TxD and RxD of Sunny Boy (Control) and large display have to be crossed (see connection scheme).



Please see in the manual for inverter or control for more information, pins of the socket there and necessary adjustments.

3. Preset (factory settings)

| | |
|--------------------------------|-----------------|
| Data source: | Impulse |
| Interface type: | RS-232 |
| Factor CO ₂ saving: | 0,70 kg per kWh |
| Impulse rate: | 2000 I/kWh |
| Start value total energy: | 0 kWh |

4. Technical data

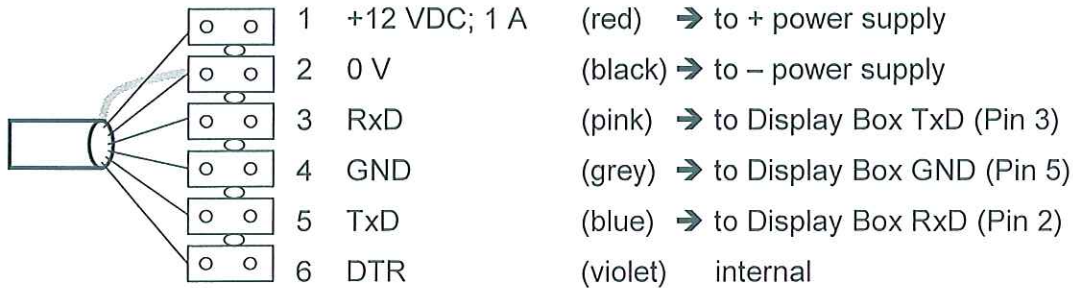
GA-1000/2000

| | |
|------------------------------|--|
| number of values | 1-x (depends on your order) |
| display units | GA-1000: 7-segment LED display with xxx mm digits red hyper bright (depends on your order) GA-2000: 7/38-segment LCD display with xxx mm digits yellow or silver (depends on your order) |
| resolution | Depends on your order Standard: Watt 4 digits kWh 6 digits kg 6 digits |
| dimension | Depends on your order Standard: ca. 70 x 50 x 5,2 cm ³ |
| material | alloy, black |
| business temp | + 5 ... + 40 °C |
| storage and transport. temp. | - 20 ... + 60 °C |
| data source | <ul style="list-style-type: none"> - Impulse meters (potential free contact) - SMA inverters (only one with interface) - SMA-Control, Control Light and Control Plus - SIC100 - Solwex inverters - others on request |
| power supply | external power supply unit Input: 230 VAC output to large display 7.5, 9, 12 VDC (depends on your order) <u>Never connect more than 12 VDC direct to the large display!</u> |
| warranty | 2 years |
| Norm | CE, EN 61326-1 |

Changes in every kind possible, printing mistakes possible.

Connecting the large display to a Fronius Display Card/Box

On the backside of the large display there is a cable witch is connected as follow:



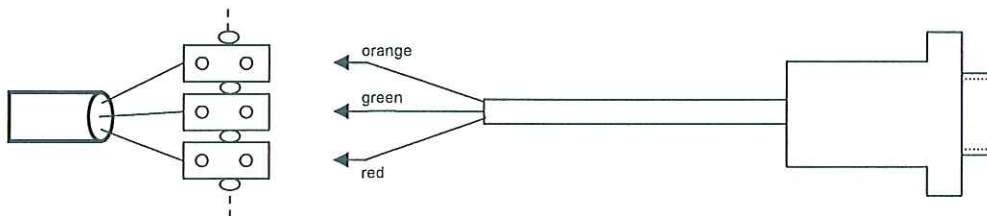
Connection:

At **screw clamp 1 and 2** the delivered power supply is connected (pay attention to polarity).
If you have to lengthen the cable please use cable with at least 0,75 mm² cross-section.

At **screw clamp 3 to 5** the Fronius Display Box is connected.

The female connector of the delivered adaptor cable can directly plugged into the male connector of the Display Box.

The adaptor cable is connected to the clamps of the large display as follow:



- ∨ If you have to lengthen the cable you can use a usual serial 1:1 cable.
(**Not** a crossed null modem cable !)

The maximum possible cable length is in any case 15 meters.

Please also read the instruction manual !

Connection scheme:

