

Installation manual RiCo Ethernet-Converter **Version Solar-Log™**

November 2016

Firmware A1.00

Version 1.00

Scope of delivery

- RiCo Ethernet Converter
- Power supply unit (7.5 VDC / 600 mA)
- RJ45 Patch cable (2 m)
- Crossover adapter
- Manual

Function

The Ethernet Converter establishes a connection between a Solar-Log data logger and a RiCo large display. The Ethernet Converter communicates with the Solar-Log via the network interface (10/100 Mbit), using TCP. The Ethernet Converter and the Solar-Log must be in the same local area network and the same subnet. The Ethernet Converter receives the actual data from the Solar-Log (actual power, daily energy, total energy). Instead of using a local area network both devices can be connected together directly via a crossover link.

The data is transmitted to the large display via the RS-485 interface. This allows a cabling length up to 1000 meters between the Ethernet Converter and the display. A shielded data cable is used for the connection, for example JY-ST-Y, CAT5. A twisted wire pair must be used for data connection.

Important hints

- The Solar-Log must have firmware version 3.1.3 or above
- The installation of the plant and all connected devices must be finished
- The IP address of the Solar-Log and the Ethernet Converter are static and both must be unique in the local area network
- The RiCo large display must be configured to data source number '7'
- The Ethernet Converter is supplied with the delivered power supply (7.5 VDC)
- The Ethernet Converter and the power supply unit are for indoor use only

Settings at delivery

IP address Converter: 192.168.0.170 _____
IP address Solar-Log: 192.168.0.168 _____
Subnet mask: 255.255.255.0 _____
Factor CO₂ saving: 0.51 _____
Reading consumption values: no _____
TCP port: 502
Output protocol: RiCo RS-485 9600 Baud 8N1
Serial number: _____

Configuration

The following settings can be configured:

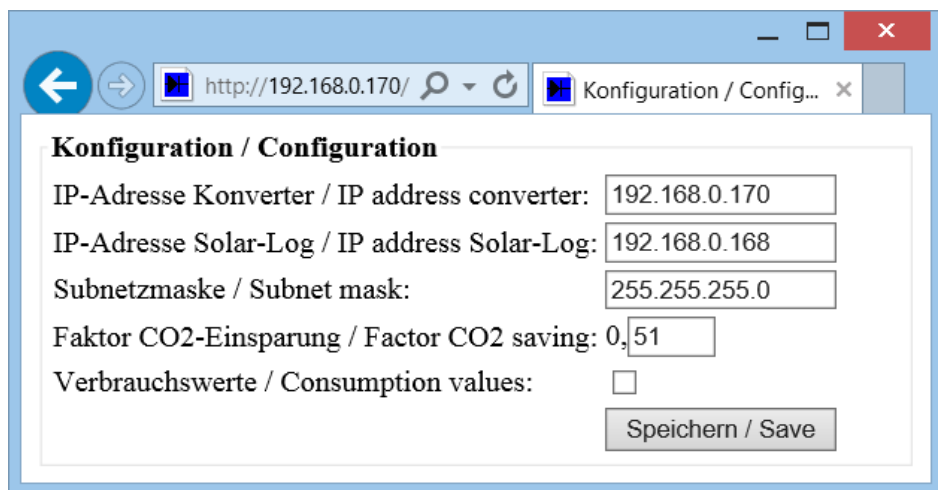
- IP address Ethernet Converters
- IP address Solar-Log
- Subnet mask
- Factor CO₂ saving
- Reading consumption values

The settings can be changed by accessing the Ethernet Converters web interface. Establish the power supply to the Ethernet Converter and connect it to the network, or directly to your PC. Enter the IP address of the Ethernet Converter in the address line of your web browser. (Ethernet Converter and PC must be in the same subnet to gain access).

Use for **Authentication**:

Username: ***admin***

Password: ***rico***



Konfiguration / Configuration

IP-Adresse Konverter / IP address converter:

IP-Adresse Solar-Log / IP address Solar-Log:

Subnetzmaske / Subnet mask:

Faktor CO₂-Einsparung / Factor CO₂ saving:

Verbrauchswerte / Consumption values:

Fill in the necessary values in the corresponding fields.

Take care to fill in **correct values** especially the fields **IP address converter** and **subnet mask** otherwise the converter will not be accessible again!

At the input field for the factor of CO₂ saving only the two digits after the decimal point can be entered. The configurable range of the factor is 0.1 to 0.99.

Just mark the checkbox **Consumption values**, if the display shows consumption values. Otherwise leave it unchecked.

After changing the values click the **Save** button and restart the converter by unplugging the power supply unit for a few seconds.

Start-up

The start-up is done in the following order:

- If necessary change the configuration of the Ethernet Converter, described at page 4 of this manual and the RiCo large display, described at the manual of the display
- Disconnect all devices from their power supply and do the installing corresponding to the connection scheme at page 6
- Reconnect all devices to their power supply

Normally the Solar-Log and the Ethernet Converter are connected via a local area network (LAN). Both devices are connected to a switch, router, etc.

It is possible to connect both devices directly also, using a crossover link. A crossover adapter is in scope of delivery.

The Ethernet Converter provides a red LED, which indicates the data flow. In the connection scheme the LED is marked with **L**. Every 30 seconds requests are sent to the Solar-Log. This is indicated by a LED flash. If the Ethernet Converter gets a valid answer from the Solar-Log the LED flashes a second time. This is repeated eight times. So if you see these double flashes eight times every 30 seconds, the communication between Ethernet Converter and Solar-Log is successful.

If the LED flashes once every 2 seconds only, the communication via network is not possible. Please check the network settings at the converter, the Solar-Log and the LAN connection.

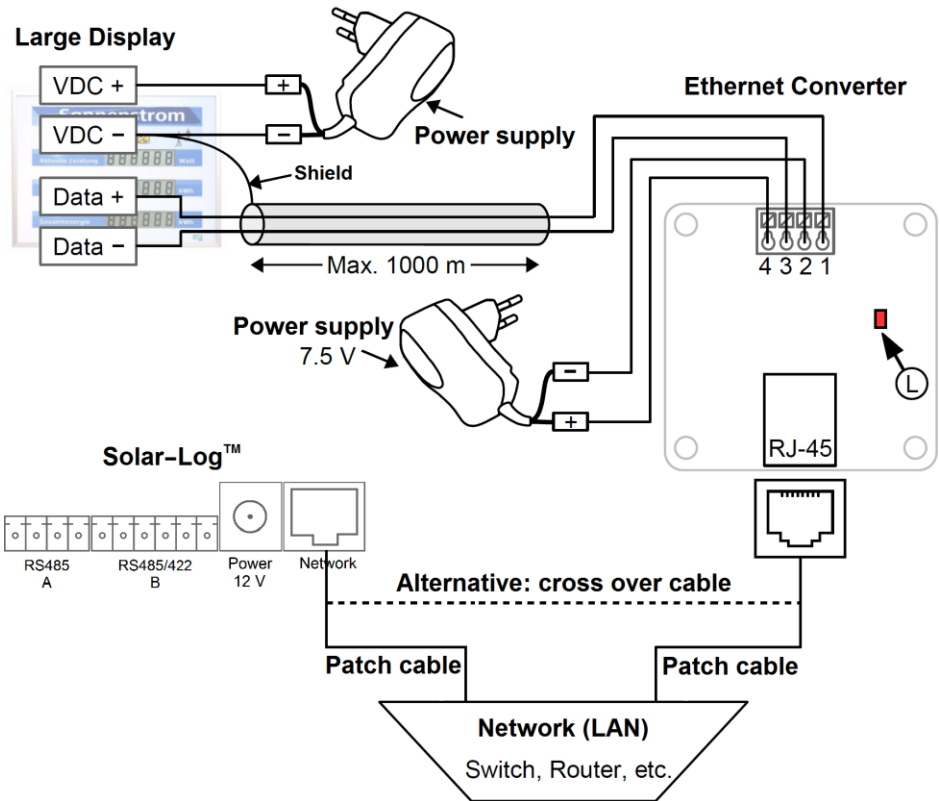
Testing the RS-485 connection between Ethernet Converter and large display

Directly after establishing the power supply to the Ethernet Converter the LED lights up for two seconds. In this time the Ethernet Converter sends zero valued protocols via RS-485 to the large display. With this option the communication between Ethernet Converter and large display can be tested independent from the communication with the inverters.

Do the following steps:

- Power up the ready configured and wired large display and wait until the display shows dashes in all lines
- **Only now** power up the Ethernet Converter
- After the flashing of the LED, the large display must show **0** in all lines

Connection scheme



Pin assignment

1: Data+	↔	Data+ large display
2: GND	↔	(-) power supply unit
3: Data-	↔	Data- large display
4: +7.5V	↔	(+) power supply unit 7.5 VDC

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Manufacturer:

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