
Interface adapter

Mounting
Connection
Installation



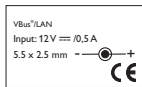
VBus® /

en

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Thank you for buying this product.
Please read this manual carefully to get the best performance
from this unit.



Subject to change. Errors excepted.

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Safety advice

Please pay attention to the following safety advice in order to
avoid danger and damage to people and property.

Description of symbols

ATTENTION! Warnings are indicated with a warning
triangle!



→ They contain information on how to
avoid the danger described.

Signal words describe the danger that may occur, when it
is not avoided.

- **ATTENTION** means that damage to the appliance can occur.
- **WARNING** means that injury, possibly life-threatening injury, can occur.

→ Arrows indicate instruction steps that should be carried out

i **Note**

Notes are indicated with an information symbol.

Target group

Initial installation must be effected by qualified personnel named by the manufacturer

Only qualified electricians should carry out electrical works

Instructions

Attention must be paid to the valid local standards, regulations and directives!

Information about the product

Proper usage

The RESOLVBus[®]/LAN interface adapter may only be used for connecting an electronic controller for solar thermal systems to a computer network or PC via the RESOLVBus[®] in compliance with the technical data specified in these instructions. Improper use excludes all liability claims.

CE-Declaration of conformity

The product complies with the relevant directives and is therefore labelled with the CE mark. The Declaration of Conformity is available upon request, please contact RESOL.



Disposal

- Dispose of the packaging in an environmentally sound manner.
- Dispose of old appliances in an environmentally sound manner. Upon request we will take back your old appliances bought from us and guarantee an environmentally sound disposal of the devices.

Overview

- The network connection for your solar system
- Access to the system via the complete network
- Remote parametrisation of the controller via VBus[®]
- Full version of the RSC software included on CD-ROM

The VBus[®]/LAN interface adapter is designed for the connecting the controller directly to a PC or router. It enables easy access to the controller via the local network of the owner.

Thus, controller access, system parametrisation and data charging can be effected from every workstation of the network.

The VBus[®]/LAN interface adapter is designed for the connection to controllers equipped with a RESOLVBus[®].

Technical data

Housing: Plastic

Protection type: IP 20 (EN 60529)

Ambient temperature: 0 ... 40 °C

Dimensions: 95 × 70 × 25 mm

Mounting:

Wall mounting is possible (optional)

Display: 1 bi-coloured LED at the front of the housing
2 LEDs at the RJ45 connection

Power supply:

Mains power supply:

100 ... 240 V~ / 50-60 Hz

Mains adapter: power supply:

12 V  / 0,5 A 5.5 × 2.5 mm

Interface: RESOLVBus®

RJ45 LAN

Supported Operating Systems:

Windows XP, Windows Vista, Windows 7

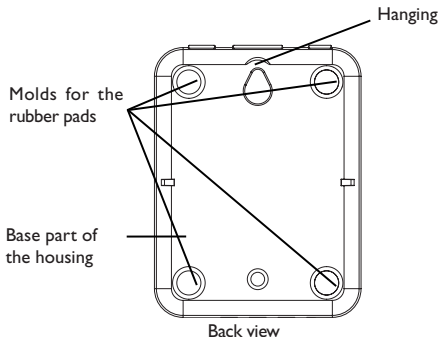
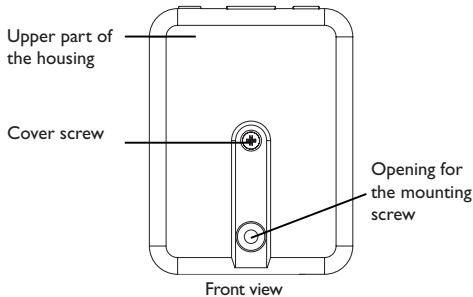
Mounting

The unit must only be located in dry interior locations. It is not suitable for installation in hazardous locations. The interface adapter is light and small enough to not require any form of mounting. It can be placed directly on the desk or on a system component (pay attention to the allowed ambient temperature!).

Four self-adhesive, skid-proof rubber pads are included with the adapter. If necessary, these can be affixed to the corresponding molds on the base part of the housing to ensure a secure placement of the device without wall mounting.

If desired, the interface adapter can be mounted to a wall:

- ➔ Mark the desired hanging position on the wall
- ➔ Drill and prepare the hole with a wall plug and screw
- ➔ Hang the device onto the screw
- ➔ Mark the position for the mounting screw (centres 70 mm)
- ➔ Drill and prepare a hole with a wall plug
- ➔ Hang the device and fasten it by means of the second screw



Electrical connection

ATTENTION! ESD damage!



Electrostatic discharge can lead to damage to electronic components!

→ Take care to discharge properly before touching the inside of the device!

ATTENTION! Short circuit!



A short circuit can lead to damage to electronic components!

→ Finish terminal connection and close the housing before establishing the mains connection!

The VBus®/LAN interface adapter needs a mains, a VBus® and a LAN connection to function. To install the VBus® cable, the housing has to be opened.

- To open the housing, unscrew the cover screw and pull off the upper part of the housing
- Connect the included VBus® cable to the VBus® terminals with either polarity

The VBus® cable can be extended or replaced with a two-wire cable (bell wire). The cross section of the cable must be at least 0.5 mm² and the cable can be extended up to 50 m in the case that one module is used.

ATTENTION! Low voltage cables must not run together in a cable conduit with cables carrying a higher voltage than 50V.



→ Pay attention to the local regulations!

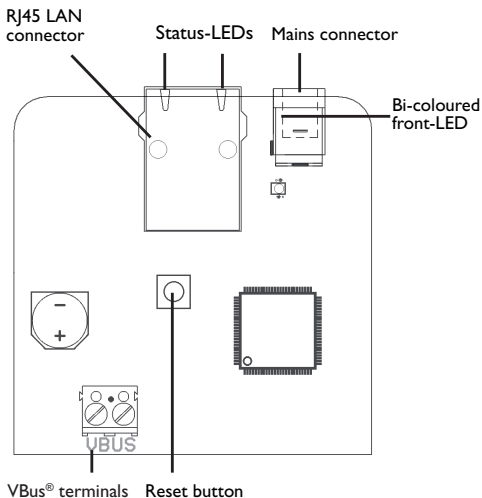
- Close the housing
- To close the housing again, relocate the upper part of the housing and refasten the cover screw
- Establish the network connection by means of the included LAN cable
- Establish the mains connection by means of the included mains adapter

Depending on whether you want to access your solar system or adjust the network settings, the VBus®/LAN interface adapter can be accessed in two different ways:

- In order to **access** the solar system **via the RESOL ServiceCenter Software** (data processing and remote parametrisation of the controller, see chap. „System access via RSC-Software“ on page 20), the VBus®/LAN interface adapter has to be accessed via the RESOL ServiceCenter Software.
- In order to adjust the **network settings** (retrieving and changing the IP address, changing the device name and password, see chap. „Network settings“ auf Seite 22), the VBus®/LAN interface adapter has to be accessed via the operating system of the computer. To make these adjustments possible, the UPnP access has to be enabled.

Electrical connection

Interior view of the VBus®/LAN adapter



System access via RSC-Software

With the RESOL ServiceCenter Software, the controller can be configured and system data can be recorded via the VBus®/LAN interface adapter. A CD-ROM containing the RSC software is included with the device.

→ Install the software on at least one computer in the network

For more information about the installation see the RSC software manual.

Data logging

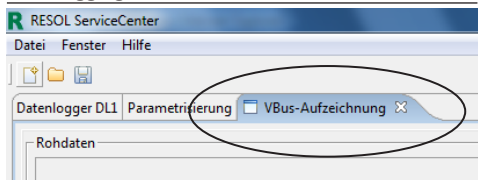


Fig. 1

In order to log data via the RSC software, proceed as follows:

- Start the RESOL ServiceCenter software
- Click on the **VBus Logging** tab (Fig. 1)
- At the bottom of the page, in the drop-down menu **Port name**, select **Connect to VBus/LAN** (Fig. 2)

The window **RESOL Device Discovery** appears (Fig. 3)

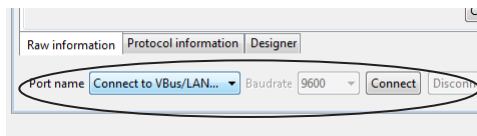


Fig. 2

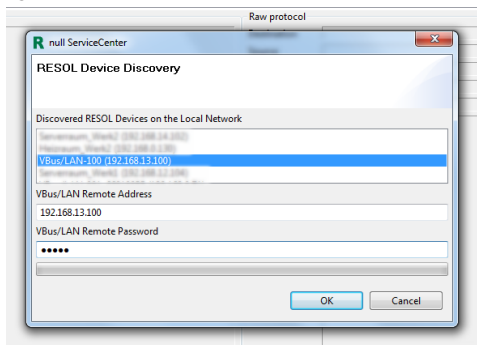


Fig. 3

- In the upper-hand menu, select the VBus®/LAN interface adapter
- Type the password into the **VBus/LAN Remote Password** input field (see chap. „Network settings“ on page 22)
- Click on **OK**

The window **RESOL Device Discovery** closes. In the **VBus Logging** tab of the RSC software, the incoming data of the controller appear and can be processed.

For more information about data processing see the RSC software manual.

Parametrization

In order to parametrise the controller via the RSC software proceed as follows:

- ➔ Open the RESOL ServiceCenter software
- ➔ Click on the tab **Parametrization** (Fig. 4)
- ➔ Down to the right of the page, in the drop-down menu **Port name**, select **Connect to VBus/LAN**

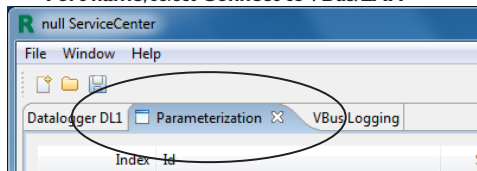


Fig. 4

In the next step, different actions are available:

- Read values: The current controller data are transferred to the computer and can be processed there.
- Write values: The data entered in the software are transferred to the controller.
- Export values: A HTML file with the current controller data is generated and can be opened in a web browser, printed, or saved.

- ➔ Click on the action you want to perform (Fig. 5)

The required input fields appear in the **Parametrization** tab of the RSC software.

For more information about parametrization see the RSC software manual.



Note

Some RESOL controllers cannot be parametrized via the RSC software.

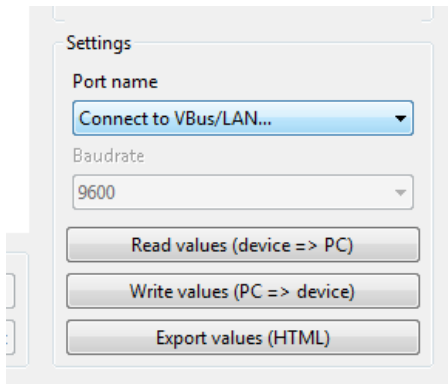


Fig. 5

Network settings



Note

Always ask a skilled system administrator to change the IP address and UPnP port number!

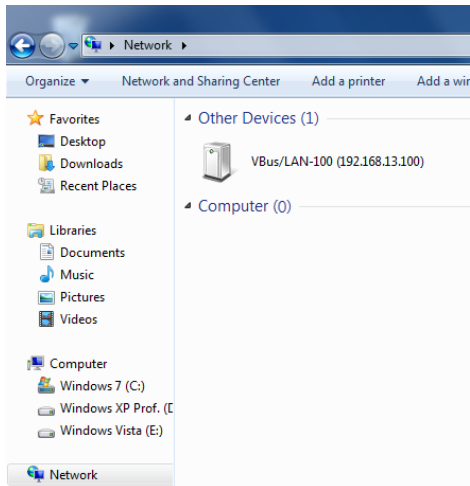


Fig. 6

In order to access the VBus®/LAN interface adapter via the operating system, the UPnP access has to be enabled. Under Windows Vista and Windows 7, the UPnP access is enabled by default.

Under Windows XP, UPnP access can be enabled in **Control Panel** / Network connections / Advanced / Optional network components... / Network services / Details. In order to access the Web interface of the VBus®/LAN interface adapter, proceed as follows:

→ Select **Computer** (Windows XP: Start / Settings) in the Start menu

→ Click on **Network** (XP: Network connections)

The VBus®/LAN interface adapter appears under **Other Devices** (Fig.6; XP: My Network Places).

→ Double-click on the symbol

The Web interface appears in the browser window (Fig. 7).

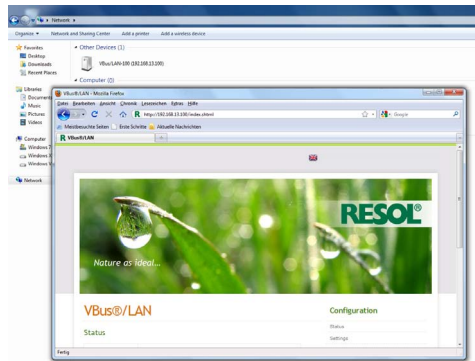


Fig. 7

The Web interface is not designed for controller access, but for adjusting the network settings of the VBus®/LAN interface adapter.

By means of the **Settings** menu of the Web interface, the following settings can be adjusted:

- Assign a static IP address to the VBus®/LAN interface adapter
- Change the name and the password of the VBus®/LAN interface adapter
- Reset the VBus®/LAN interface adapter
- Select a menu language for the Web interface
- Change the UPnP-port number

Changing the password

The default password for the VBus®/LAN interface adapter is „vbus“. It can be changed in order to prevent unauthorised access.

To change the password, proceed as follows:

- ➔ Click on **Settings** in the Web interface
- ➔ Enter the desired password into the **VBus Password** input field
- ➔ Click on **Update Settings**

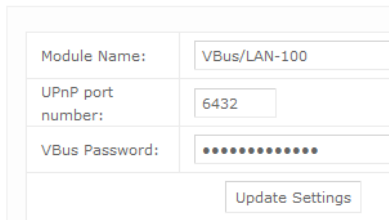
The new password is saved.

Accessing the device is not possible without the correct password.

- ➔ Note down the new password and keep it carefully!

If the password is lost, the device has to be reset to the factory settings. For more information see chap. „Reset“ auf Seite 24.

General Configuration Settings



Module Name:	VBus/LAN-100
UPnP port number:	6432
VBus Password:
<input type="button" value="Update Settings"/>	

Fig. 8

Changing the module name

In the same menu, a new module name can be assigned to the VBus®/LAN interface adapter. The device will be displayed with its module name in the network.

- ➔ Enter the desired name into the **Module Name** input field
- ➔ Click on **Update Settings**

The new module name is saved.

Reset

If the password for the VBus®/LAN interface adapter is lost, the device has to be manually reset to the factory settings. In order to conduct a reset, proceed as follows:

- Open the housing (see chap. „Electrical connection“ auf Seite 18)
- Press the reset button for 5 seconds

During the reset process, the front-LED flashes red.

As soon as the reset is completed, the LED switches to a permanent red.

- As soon as the LED switches to a permanent red, release the reset button!
- When the reset has been completed, close the housing (see chap. „Electrical connection“ auf Seite 18)

The reset will set the device back to factory settings. All adjustments made in the Web-Interface (see chap. „Network settings“ on page 22) will be lost and will have to be made again.

LED at the front of the housing

The VBus®/LAN interface adapter has one bi-coloured LED at the front of the housing and two LEDs at the RJ45 LAN connector.

The bi-coloured LED at the front of the housing indicates the current operating status of the VBus®/LAN interface adapter:

LED flashes green:

Adapter is booting

LED is permanently green:

Normal operation, access is now possible
Static IP address/IP address obtained from a DHCP server

LED slowly flashes green:

Normal operation, access is now possible
IP address has been assigned automatically

LED irregularly flashes green:

Normal operation, data traffic

LED flashes red/green:

Network connection okay, no VBus® signal

LED quickly flashes red:

Reset in progress

LED is permanently red:

Reset completed

Status LEDs at the RJ45 LAN connector

At the RJ45 LAN connector there are two status LEDs which indicate the status of the network connection:

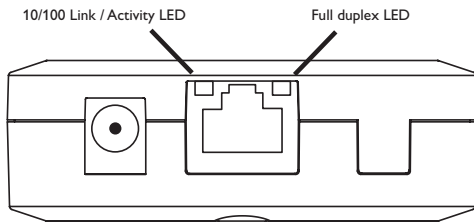
10/100 Link / Activity LED:

LED glows: Network connection ok, no data traffic

LED flashes irregularly: data traffic

Full duplex LED:

LED glows: Full duplex active



Glossary

DHCP

Dynamic Host Configuration Protocol, short: DHCP, describes an Internet protocol that controls the automatic retrieval of IP addresses and other data in a network.

IP address

IP stands for Internet Protocol, the network standard on which the Internet and most local area networks are based. Each device inside the network is assigned with an **IP address** by means of which it can unmistakably be identified.

An IP address according to the current IPv4 standard consists of 32 Bits, equalling a 32-digit binary number. To make them more clear, IPv4 addresses are commonly represented as four decimal numbers between 0 and 255, separated by period marks, e. g. 130.094.122.195.

LAN

A Local Area Network, short: **LAN**, is a delimited network of computers and other devices (e. g. printer, router or our own VBus®/LAN interface adapter). A Local Area Network is not limited to a certain size or diversity.

RJ45

RJ-connectors are standardised telecommunication cable connectors. The RJ-standard has been established by the US-american Federal Communications Commission (FCC), the letters RJ stand for Registered Jack.

The commonly used LAN connectors are called **RJ45**-connectors. Other commonly used names are „ISDN plug“ for unscreened and „ethernet plug“ for screened connectors of this kind.

UPnP

Universal Plug and Play, short: **UPnP**, denotes a standard for cross-brand access to devices in an IP-based network.

VBus®

In telecommunication engineering, a bus is a system for data transfer between different parties. The **VBus®** is a field bus, developed by RESOL, which sends and receives data packets via a voltage signal and also supplies connected devices with extra-low voltage.

Full duplex

In telecommunication engineering, different communication standards are defined by their directionality. Communication that can only occur in a definite direction from sender to receiver is called **simplex**, an example is radio broadcasting. If both parties can be sender or receiver, but never both at the same time, as for example in amateur radio, the communication is called **half duplex**. If all parties can send and receive data at the same time, such as it is in telephony, the communication is called **full duplex**. Like most network devices, the VBus®/LAN interface adapter is capable of full duplex communication.

Web interface

An interface is a connection, either between two pieces of equipment or between a person and a computer, Web standing for the Internet. RESOL devices such as the VBus®/LAN interface adapter or the DL2 Datalogger have an integrated software that can be opened and operated in every web browser. This software is called **Web interface** because it is an interface to the device that can be accessed via the Internet.

Important notice

We took a lot of care with the texts and drawings of this manual and to the best of our knowledge and consent. As faults can never be excluded, please note:

Your own calculations and plans, under consideration of the current standards and directions should only be basis for your projects. We do not offer a guarantee for the completeness of the drawings and texts of this manual - they only represent some examples. They can only be used at your own risk. No liability is assumed for incorrect, incomplete or false information and / or the resulting damages.

Please note

The design and the specifications are to be changed without notice.

The illustrations may differ from the original product.



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