

## eibPort Version 3

10104 / 13104 / 11104 / 10304 /  
13304 / 11304 / 10504 / 11504

## Short Manual

State: 04.11.2013

**Character reference 'lower case':**  
abcdefghijklmnopqrstuvwxy z    Ø= zero  
**Character reference 'upper case':**  
ABCDEFGHIJKLMN O PQRSTU VWXYZ

<b>eibPort Default IP:</b>	192.168.1.222
<b>Default Username:</b>	admin
<b>Default Password:</b>	eibPort

### Security advices

Installation and assembly of electrical devices have to only be carried out by an electrician. Current accident prevention regulations must be followed. Knowledge of network technology is required for commissioning. Choked bus voltage must not be used as 10–30 V DC operating voltage. The eibPort-string is located on a sticker on the back of the device and in these instructions. Store the string at a safe place. Loss of the string prevents access to the configuration. If the device is connected to the internet, please consider all current advices regarding unauthorized access ( Firewall rules, password policy etc.). Failure to observe these instructions may lead to damage to the device, fire, or other hazards. These operating instructions are an integral component of the product, and must be retained by the end user.

## Structure of the device

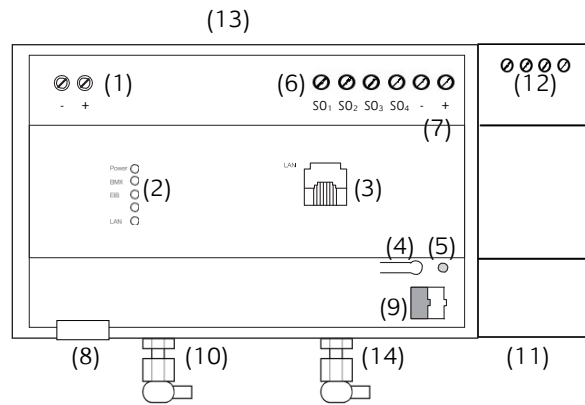


Figure 1: Device overview

- (1) Terminal for Power Supply 10-30V DC, <= 5 VA
- (2) Signal-LEDs
- (3) RJ45 socket for Ethernet LAN
- (4) KNX/EIB programming button, only for checking the bus voltage
- (5) KNX/EIB programming LED
- (6) SO pulse input terminal (for e.g. energymeter)
- (7) Terminal for SO pulse input Power Supply 24V DC
- (8) USB-2.0 terminal for 1-Wire
- (9) KNX/EIB bus terminal  
(for Typ 10104 / 10504 / 10304)
- (10) SMA terminal for EnOcean antenna  
(for Typ 10504 / 13104 / 11504 / 13304)
- (11) Coupling unit for Powernet  
(for Typ 11104 / 11504 / 11304)
- (12) Powernet terminal  
(for Typ 11104 / 11504 / 11304)
- (13) Sim Card Slot  
(bei Typ 10304 / 13304 / 11304)
- (14) SMA terminal for GSM antenna  
(bei Typ 10304 / 13304 / 11304)

## Operating status display

The current operating status of the eibPort is displayed by signal LEDs on the front of the device:

### POWER-LED

Off	The device is not ready for operation. There is no power supply.
GREEN	The device is ready for operation.
ORANGE	The device is booting.

### BMX-LED

Off	The application server is not running. Only access to the eibPort startpage.
GREEN	The application server is running.
GREEN flashing	Indicates current communication via BMX-Protocol.

### EIB-LED

Off	The KNX-driver is not running.
RED flashing	The eibPort starts the KNX-driver.
GREEN	The KNX-driver is running.
ORANGE flashing	KNX-driver processes telegrams.

### LAN-LED

Off	The device is not connected to LAN.
GREEN	eibPort has a connection to the LAN on OSI Layer 2.
ORANGE flashing	The device is exchanging data with the LAN.

## Information for electricians

### Mount the device

- Clip device onto DIN rail in accordance with DIN EN 60715.
- Device gets warm during operation. Observe maximum operating temperature. Ensure sufficient heat dissipation.

### Connect device (figure 1)

- For KNX: Connect bus line to bus terminal (figure 1, 9)  
(for Typ 10104 / 10504 / 10504).
- For Powernet: Connect Wire to Powernet Terminal (figure 1, 12)  
(for Typ 11104 / 11504 / 11304)
- For EnOcean: Connect antenna to antenna terminal (figure 1, 10)  
(for Typ 10504 / 13104 / 11504 / 13304)
- For GSM: Insert the SIM card and follow the additional manual "GSM- initial operation" (find it on the enclosed CD or for download on [www.bab-tec.de](http://www.bab-tec.de))  
(for Typ 10304 / 13304 / 11304)
- Connect power supply to the screw terminals (figure 1, 1) according to markings. Please consider polarity. The unchoked output of a KNX/EIB power supply can be used as power supply (consider the Power consumption).
- Insert network connector (LAN) in RJ45 socket (figure 1, 3).
- If you use SO pulse input: Connect 24 V DC to the terminal for the SO pulse input power supply (Figure 2, 5).  
**Not 230V!**  
Connect SO pulse input devices to the SO pulse input terminals as follows see Figure 2, 4.

- (1) Reed-contact to be placed on the counter.
- (2) e.g. Eltako Single-phase Energy Meter WSZ12D-32A
- (3) Power Supply 24V DC
- (4) SO pulse input terminal (for e.g. energymeter)
- (5) Terminal for SO pulse input Power Supply 24V DC

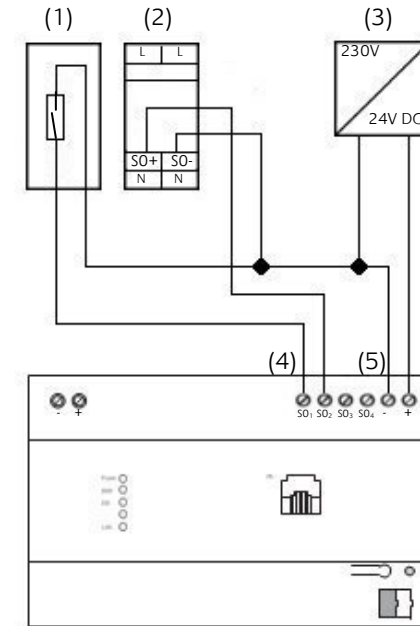


Figure 2: SO pulse input connection plan

### Put it into operation

- For KNX: Switch on bus voltage  
(for Typ 10104 / 10504 / 10504).
- For Powernet: System-ID is set correctly on ConfigTool. See eibPort documentation (on CD or [www.bab-tec.de](http://www.bab-tec.de)).  
(for Typ 11104 / 11504 / 11304)
- follow the additional manual "GSM- initial operation" (find it on the enclosed CD or for download on [www.bab-tec.de](http://www.bab-tec.de))  
(for Typ 10304 / 13304 / 11304)
- eibPort does not require ETS application. BCU does not require programming.
- Switch on supply voltage. The device is ready for operation when the upper three LEDs (Power, BMX and EIB) as well as the LAN LED are lighting green resp. are blinking depending on the traffic on LAN and KNX.

### PC requirements

To work with the eibPort you need a java installation and a browser. Due to that the eibPort software is platform independent. The visualisation interface can actually be used without java, only with a browser.

### Java and Browser version

We recommend using a current version of Google Chrome, Mozilla Firefox or Apple Safari for Mac OS. Please consider to have the latest java version installed, as well as that the java browser plug-in is up-to-date. If java is not installed yet, you will find the latest version at [www.java.com](http://www.java.com). Please check the following settings, before you beginning the work with the eibPort.

### Delete and disable temporary internet files

If the latest Java Version is installed please close all browser windows (also Download popups etc) and access to the Java Control Panel via „Start“ > „Control Panel“ > „Java“. In the first Tab „General“ you will find „Settings“ for „Temporary Internet files“. Disable the check box from „Save temporary internet files on computer“ and delete these files using the „Delete“ button below.

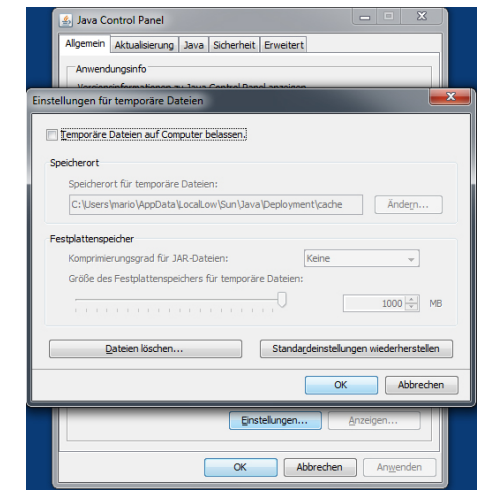


Figure 3: Disable temporary internet files

### Memory extension for Java / deinstall old Java versions

From tab „General“ switch to tab „Java“. Open the settings for Java runtime environment by „Show“. The window shows all installed versions. If more than one version is installed; deinstall the older ones first. Then double click on the array „Java Runtime Parameter“ and enter „-Xmx256M“ (consider the minus character). Finish with the „Enter“ button and leave the window by „OK“. Note: in „Java Control Panel“ it is important to click on „Apply“ before closing the window by „OK“.

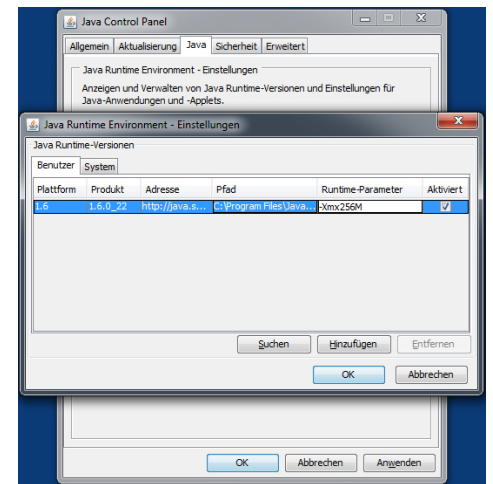


Figure 4: Increase java heap space

After that, please also delete the cache data of your browser. You will find corresponding instructions in the internet or in the help files of your browser. In case all necessary steps are done, the browser must be restarted.

## Set up PC access to eibPort via network

The eibPort is ready for operation. A PC is connected.

- Ascertain and note current network configuration of your PC.
- Set the network address of your PC in range 192.168.1.x. e.g. 192.168.1.25. Standard subnet mask for 192.168.1.x is 255.255.255.0. The default network address of eibPort is 192.168.1.222. If another network participant uses this IP address, it should be separated to avoid network conflicts. If it is unclear whether this IP address is already in use, a direct connection of the PC and eibPort will avoid any possible network conflicts.
- Launch the browser.
- Enter the IP address of eibPort 192.168.1.222 in the address bar. The eibPort startpage opens. PC access to the eibPort is established.
- Alternatively you can use the DiscoveryTool. All eibPorts connected to the network will be displayed in the DiscoveryTool and changing of the IP address is directly possible.

## Starting ConfigTool

PC access to the eibPort is established. The eibPort start page is open.

- Click on the System menu item.
- Enter your username and password in the login window. The default access data is:  
Username: admin  
Password: eibPort
- You will be requested to change administrator's password to avoid unauthorized access.
- The entry window for the eibPort string opens.
- The eibPort-string is located on a sticker on these instructions and on the back of the device, it should be kept safely. The string is unique and serves to identify the eibPort. It cannot be changed and is requested every time you access the ConfigTool.

Character reference 'lower case':  
abcdefghijklmnopqrstuvwxyz    Ø= zero  
Character reference 'upper case':  
ABCDEFGHIJKLMNOPQRSTUVWXYZ

- Enter the eibPort string to open an encoded connection.
- The ConfigTool opens. The interface of the "Configuration" tab is visible on the screen (figure 5).

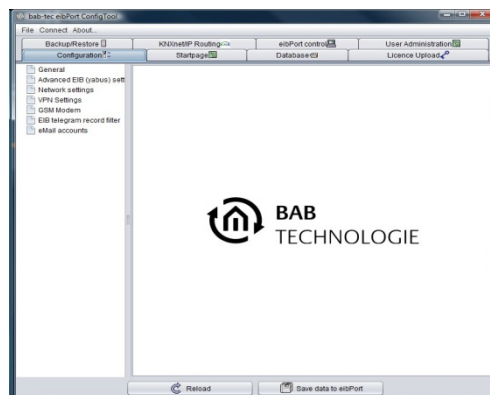


Figure 5: ConfigTool

## Complete basic settings

The ConfigTool is opened. The tab "configuration" is in the foreground.

- Click on the "General" menu item in the left array. The current settings are displayed (figure 6).

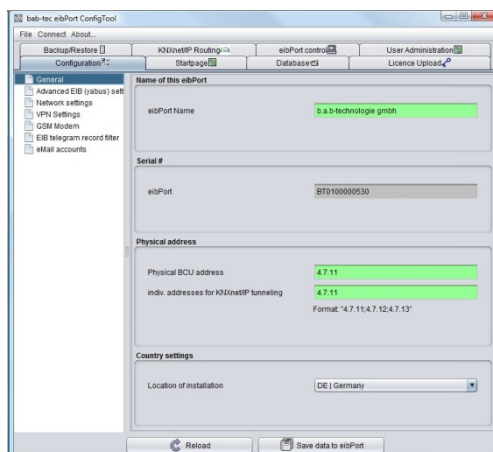


Figure 6: General window

- Enter an appropriate name in the "eibPort name" array. The name is being used to identify the eibPort in DiscoveryTool.
- Enter physical BCU address for the KNX/EIB.
- Enter the „individ. address f. KNXnet/IP Tunneling“. This address is only used for KNXnet/IP Tunneling connection (e.g. to program KNX devices). Please note that both addresses (BCU and KNXnet/IP Tunneling) must not be the same!
- Follow conventions used for allocating physical addresses in KNX/EIB.
- Click on the "Network settings" menu item. A window is displayed showing the current settings (figure 7).

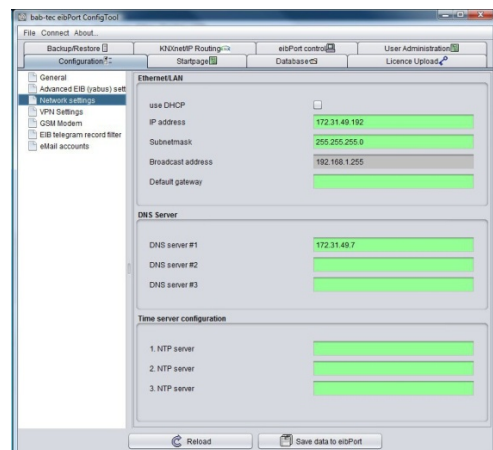


Figure 7: Network Settings window

- Assign an unique IP address.
- Over this IP address the device is accessed in the network. If necessary, select an available IP address from the originally noted network configuration that the PC was connected to if this is to be used again.
- A standard subnet mask for local networks is 255.255.255.0.
- Enter IP address of default gateway. The internal IP address of the router in the network must be normally entered here.

- Enter at least one DNS Server. In case of doubt please contact your internet service provider to get a valid DNS server address. Eventually you can use the default gateway address here as well.
- Save new configuration with "Save data" and close the browser. The changes will be applied. You have to reconnect to eibPort due to network changes
- Adapt PC network settings if necessary (if the eibPort was brought into another network!). The IP address must be in the same IP address range as the eibPort.
- Since then the new IP address must be entered in the browser's address bar when you want to use eibPort.
- Use the DiscoveryTool if you are not sure (find it on the enclosed CD or for download on [www.bab-tec.de](http://www.bab-tec.de)).

## Safety precautions about remote visualisation and remote maintainance:

Please use encrypted connections only, connect via the VPN server in your router (if available) or the VPN server inside eibPort. This is used as follows:

## Setting up VPN connection with eibPort

### Enable the VPN server of the eibPort

Browse the eibPort menu "System" > "Configuration" > "VPN settings" and enable the VPN-server. The user name "vpn" is not changeable, and the password must be minimum of 10 characters long and should contain upper and lower case letters as well as numbers and special characters. The VPN IP addresses are already entered by default (eibPort VPN IP = 192.168.42.42, Client VPN IP = 192.168.42.100).

These addresses should not be the same as are used in the local networks in which eibPort or VPN-client are placed. If the virtual IP address has to be changed in the eibPort, they have to be within the same subnet (255.255.255.0). That means that these addresses must be the same in the first three parts whereas the last part must be different. Example: In the address space 172.16.0.x only at the point "x" two different numbers (0-255, but not "0" and not "255") must be entered.

### Important advices:

- The VPN-address space should not comply with the space in which VPN-client or eibPort are part of.
- It is only allowed to use private address space.
- The address space 10.0.0.0/8 can cause problems with windows systems
- Please choose a safe password
- In networks where another VPN-solution already exists, using the eibPort VPN can cause problems.

## Firewall settings

In order to establish a VPN connection through the internet the router onsite needs a port forwarding rule. The necessary port number is 1723 (TCP).

### Establish VPN connection:

In order to establish the connection with VPN-server of the eibPort, a new network connection "VPN" must be created (if it is not done before) in the corresponding windows menu. With Windows 7 please proceed as follows:

- Access the "Network and Sharing Centre".
- Click on "Create connection or a network".
- Choose the option "Connection between network and my workplace"
- Choose the option "No, create new connection", if necessary.
- You want to use "The internet connection (VPN)".
- Please enter the external /WAN IP address or hostname of the router for the eibPort network, into the array "Internet address".
- Enter the "username" and "password" for the VPN connection. A "domain" must not be set.
- Push the button "Connect"!

The Windows VPN-Client now tries to establish a connection to the eibPort by using the entered access data. If the connection is successful, you will reach the eibPort by entering the IP address which is displayed in the eibPort menu ("eibPort VPN IP" = 192.168.42.42) into your browser.

If the connection cannot be established successfully please choose the option "Set up connection anyway". By this it is been applied as a new connection within the network connections of Windows so that it can be adjusted or restarted at any time! You will reach the connection overview by accessing "Control Panel" > "Network and Internet" > "Network connections".

## Additional safety advices

Please use also safe passwords for the access to Visualisation resp. Editor and keep them at a safe place. Enable the services of the eibPort (like KNXnet/IP Tunneling for programming) only for the period you are really using them. If a service is just not needed, it should be disabled.

## Technical data

- Dimension (W x H x D): 144 x 90 x 64 mm
- Operating voltage: 10–30V DC
- Power consumption: ≤ 5 VA
- Typical power consumption: 24V, 100mA
- Bus voltage via KNX/EIB
- Operating temperature: 0 - 35 °C
- Processor: Vortex 86DX@600MHz
- Memory: 256 MB SD-RAM, 4 GB Flash
- Operating System: Embedded Linux,
- Java Runtime Environment since Version 1.6 required

## Warranty

We reserve the right to make technical and formal changes to the product in the interest of technical progress. Our products are under guarantee within the scope of the statutory provisions.

If you are unsure if the device is defective, please contact our support first: + 49 231 476 425 30 or [service@bab-tec.de](mailto:service@bab-tec.de)

Before you send the defective product to us, please request an RMA form to us.

**Please note that we can't accept shipments without RMA form !**

### b.a.b-technologie GmbH

Rosemeyerstr. 14  
D- 44139 Dortmund  
Germany

Phone: +49 23 1/ 476 425-30

Fax: +49 23 1/ 476 425-59

[info@bab-tec.de](mailto:info@bab-tec.de)

[www.bab-tec.de](http://www.bab-tec.de)

Made in Germany