12 CO IP-Interface 720001

Application program usage

Product family: System devices
Product type: IP-Interface
Manufacturer: Siemens

Name: IP Interface N148/21
Order-No.: 5WG1 148-1AB21

Functional description

The IP Interface N148/21 is a DIN rail mounted device.

This device enables communication connections to EIB lines or systems via data networks using the Internet Protocol (IP). PC's or other data processing equipment can exchange data with EIB devices through this communication link.

The physical connection to the EIB is established via a bus connector terminal block. For connection to the data network (IP via 10BaseT) the device contains an RJ45 socket.

To operate the IP Interface requires AC/DC 24 V, which is provided via a second terminal block. The IP Interface is powered via this operating voltage terminal connector.

The IP Interface employs the EIBnet/IP Tunneling standard, which enables sending EIB telegrams via an IP network to an EIB installation and thus connecting to the bus from a PC.

By using a LAN modem an EIB installation can be remotely accessed even if there is no direct data network connection between a PC and an IP Interface. LAN modems are available on the market for standard telephone, ISDN or DSL connections.

The IP Interface has these characteristics:
- Simple connection to hierarchically superimposed systems via Internet Protocol (IP)
- Direct access to the EIB installation from any access point to the IP network (EIBnet/IP Tunneling)
- Communication between buildings and facilities
- LED display of
  - operation
  - EIB communication
  - IP communication
- Simple configuration with standard ETS
- Easy connection to SCADA and Facility Management systems (see: Supported Software)

IP Interface as interface to the bus (EIBnet/IP Tunneling)
A direct connection between a networked PC and the bus can be established via a data network and the IP Interface N 148/21. This allows for accessing the bus from any access point in the data network.

IP address assignment
The IP address of the IP Interface N 148/21 is assigned manually using ETS or automatically by a DHCP server in the IP network. Assignment of the IP address by a DHCP server allows for changes of the device IP address without using ETS. Configuration of the DHCP server may require the MAC address, which is printed on the device.

Please consult your network administrator regarding configuration of the parameters device IP address, subnet mask, and DHCP.

Default factory settings
The IP Interface ships with these default factory settings:
- Physical address of the IP Interface:
  15.15.255 (= FFFF hex)

Configuration with ETS
The IP Interface N 148/21 can be configured with ETS2 V1.2 and later versions.

Note

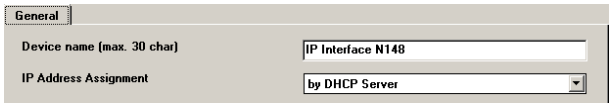
The IP Interface can be reset to the default factory settings by pressing the learning button for more than six seconds when the operation voltage is turned on. The transition to the default state is indicated by a blinking programming LED. All parameter settings are deleted by this reset action.

12 CO IP-Interface 720001

Communication objects

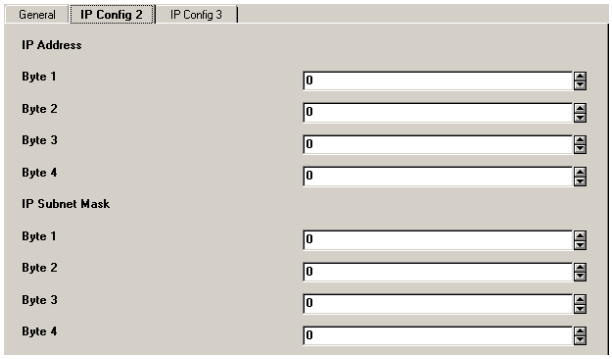
The application program does not contain any communication objects.

Parameter General



Parameter	Settings
Device name (max. 30 char)	Name with max. 30 characters
This parameter determines the name (max. 30 characters) of the IP Interface N148/21, which is used for easy recognition of the device when searched by an EIBnet/IP visualisation or the ETS.	
IP Address Assignment	**by DHCP Server** manual input
This parameter determines the type of IP address assignment. By default the parameter is set for automatic assignment of the IP address by a DHCP server. If “manual input” is selected two additional tabs appear for manual input of the IP address, subnet mask, and the default gateway address.	

Parameter IP Konfiguration



Parameter	Settings
IP Address Byte 1, Byte 2, Byte 3, Byte 4	**0.0.0.0**
This parameter is only visible if manual input was chosen for IP Address Assignment. It determines the IP address of the IP Interface.	
The factory default setting for the IP address is **0.0.0.0**. This default value must be replaced by a valid IP address. Each byte of the four byte IP Routing Multicast Address is set separately, with a value range of 0...255 for each byte.	
IP Subnet Mask Byte 1, Byte 2, Byte 3, Byte 4	**0.0.0.0**
This parameter is only visible if manual input was chosen for IP Address Assignment. It determines the IP subnet mask used by the IP Interface. The factory default value is **0.0.0.0**. This default value must be replaced by a valid subnet mask. Valid subnet mask values are e.g. 255.255.255.0 or 255.255.240.0. Each byte of the four byte IP Routing Multicast Address is set separately, with a value range of 0...255 for each byte.	
IP Standard Gateway Byte 1, Byte 2, Byte 3, Byte 4	**0.0.0.0**
This parameter is only visible if manual input was chosen for IP Address Assignment. It determines the IP address of the IP Standard Gateway. The factory default value is **0.0.0.0**. This default value may be replaced by a valid IP address. Each byte of the four byte IP Routing Multicast Address is set separately, with a value range of 0...255 for each byte. The Standard Gateway transmits IP datagrams to IP devices with IP addresses outside of the local network. Use the predefined (invalid) IP address (**0.0.0.0**) if the device shall be configured without a Standard Gateway.	

12 CO IP-Interface 720001

Supported Software

Here is a list of software supporting the IP Interface N 148/21.

ComBridge Studio

IPAS GmbH
Grabenstr 149 a
47057 Duisburg
[http://www.ipas-products.com]

ComBridge Studio is a visualization software that can use the IP Interface N148/21, the IP Router N146, and the IP Controller N350E as interface to EIB. Find more information in the GAMMA catalog or at the above listed web site.

ETS3

EIBA s.c.
Bessenveldstraat 5
B-1831 Diegem
[http://www.eiba.com]

An EIBnet/IP driver is available for ETS3. When this driver is installed ETS3 may use the IP Router N146 and the IP Interface N148/21 as interfaces to the bus just like a standard RS232 or USB serial interface. This function includes download of device configuration via the bus and the group monitor function of ETS3.

Note

The ETS3 driver currently does not support busmonitoring and local download. When attempting a local download to the IP Interface N148/21 this message appears: "incompatible BCU version $091A (required $0012)".

Note

After installing the ETS3 driver and selecting the IP Interface N148/21 or the IP Router N146 as communication interface a windows message may pop up announcing that a "Class" is unknown.
In this case install the Microsoft .Net Framework that you can download from the Microsoft software update site (file size: approx. 25MB).

General Notes

- Any faulty devices should be returned to the local Siemens office.
- If you have further questions about the product, please contact our Technical Support:

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www.siemens.com/automation/support-request

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