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</table>
This manual describes the function and configuration of the Internet Gateway. The contents are subject to change without prior notice.

Microsoft and Windows are registered trade marks.

Exclusion of liability:
Although the contents of this document have been checked to ensure that they are consistent with the hardware and software, deviations cannot be completely excluded. In such cases liability cannot be accepted. Any necessary corrections will be incorporated in new versions of the manual. Please inform us of any suggested improvements.
1 General

1.1 About this manual

The manual is directed at the commissioning engineer and user of the Internet Gateway. All the necessary steps for the initial commissioning stage are explained together with all the functions available to the user.

The manual describes 4 devices which are either differentiated by the type of telephone connection (ISDN/analogue) or the type of inputs/outputs (binary, analogue inputs/outputs/EIBconnection).

<table>
<thead>
<tr>
<th></th>
<th>ISDN connection</th>
<th>Analog connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 binary inputs,</td>
<td>IN/S 1.1</td>
<td>IN/S 2.1</td>
</tr>
<tr>
<td>4 analogue inputs,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 binary outputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIB connection</td>
<td>IN/S 3.1</td>
<td>IN/S 4.1</td>
</tr>
</tbody>
</table>

This manual is divided into the following sections:

- Description of the device technology (chapter 3)
- Installation (chapter 4)
- Commissioning (chapter 5)
- Operation (chapter 6)
- Planning and application (chapter 7)
The ABB Internet Gateway IN/S enables access to the electrical installation from any Internet access point. The installation can thus be conveniently operated and monitored remotely.

Live images can be transmitted with an additional module (VM/S) and a video camera.

The Internet Gateway can also alert you automatically via e-mail. These e-mail messages can be sent to suitable mobile devices, e.g., mobile phones.

Editors are available for the logic operation of inputs and outputs and for timer functions. These editors can be operated both simply and quickly via the Internet or Intranet.

**1.2 Product and functional overview**

The ABB Internet Gateway IN/S enables access to the electrical installation from any Internet access point. The installation can thus be conveniently operated and monitored remotely.

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Editors are available for the logic operation of inputs and outputs and for timer functions. These editors can be operated both simply and quickly via the Internet or Intranet.
<table>
<thead>
<tr>
<th>System benefits</th>
<th><strong>Easy access</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>An Internet access point is sufficient to access the Internet Gateway world-wide.</td>
</tr>
<tr>
<td><strong>Simple configuration</strong></td>
<td>A PC with a web browser (MS Internet Explorer® or Netscape Communicator®) is sufficient for the configuration of the device. The complete software is available on the device. It is not necessary to install any additional software.</td>
</tr>
<tr>
<td><strong>Automatic notification</strong></td>
<td>The IN/S can send configurable messages via e-mail.</td>
</tr>
<tr>
<td><strong>Measured data acquisition</strong></td>
<td>The IN/S can record measured values and low-level signals. The historical data memory for binary inputs and analog values enables the representation of waveforms.</td>
</tr>
<tr>
<td><strong>Live video</strong></td>
<td>The IN/S can transmit live images in connection with the video module VM/S. The picture memory can store up to 128 images.</td>
</tr>
<tr>
<td><strong>Individual adjustment</strong></td>
<td>Apart from the year timer (synchronisable over Internet) with 32 programs and other modules, it is also possible to create logical, mathematical and time-controlled functions in a macro editor that is simple to operate.</td>
</tr>
</tbody>
</table>
The IN/S is supplied with the following accessories. Please check your delivery against the following list:

**IN/S 1.1 (ISDN modem)**
- IN/S 1.1 device with plug-in terminals
- RJ45 telephone connection cable, black
- Network connection cable (patch cable, grey)
- Network connection cable (crossover cable, red)
- Passwords and domoport registration documents

**IN/S 2.1 (analogue modem)**
- IN/S 1.1 device with plug-in terminals
- RJ45 to RJ11 telephone connection cable, black
- Network connection cable (patch cable, grey)
- Network connection cable (crossover cable, red)
- Passwords and domoport registration documents

**IN/S 3.1 (ISDN modem)**
- IN/S 3.1 device with plug-in terminals
- RJ 45 telephone connection cable, black
- Network connection cable (patch cable, grey)
- Network connection cable (crossover cable, red)
- Passwords and domoport registration documents

**IN/S 4.1 (analog modem)**
- IN/S 4.1 device with plug-in terminals
- RJ 45 to RJ 11 telephone connection cable, black
- Network connection cable (patch cable, grey)
- Network connection cable (crossover cable, red)
- Passwords and domoport registration documents
3 Device technology

The device functions of the IN/S are explained in this section. The devices can be distinguished as follows:

<table>
<thead>
<tr>
<th>ISDN connection</th>
<th>Analog connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 binary inputs, 4 analogue inputs, 6 binary outputs</td>
<td>IN/S 1.1</td>
</tr>
<tr>
<td>EIB connection</td>
<td>IN/S 3.1</td>
</tr>
</tbody>
</table>

The operation and configuration of the devices is largely identical.

3.1 Technical data

3.1.1 IN/S 1.1, IN/S 2.1

<table>
<thead>
<tr>
<th>Operating voltage:</th>
<th>12 – 24 V DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption:</td>
<td>Approx. 8 watt</td>
</tr>
<tr>
<td>Mechanical data:</td>
<td></td>
</tr>
<tr>
<td>Dimensions (H x W x D):</td>
<td>86 x 157 x 58 mm (9 modules wide)</td>
</tr>
<tr>
<td>Protection class:</td>
<td>IP 20</td>
</tr>
<tr>
<td>Wire range:</td>
<td>max. 2.5 mm²</td>
</tr>
<tr>
<td>Weight:</td>
<td>0.250 kg</td>
</tr>
<tr>
<td>Mounting:</td>
<td>DIN rail in accordance with EN 50022</td>
</tr>
<tr>
<td>Inputs:</td>
<td></td>
</tr>
<tr>
<td>Binary inputs:</td>
<td>6 channels for potential-free contacts</td>
</tr>
<tr>
<td>Output voltage: max. DC 24 V, depending on the power supply voltage (12-24 V)</td>
<td></td>
</tr>
<tr>
<td>Output current: max. 10 mA, minimum 1 mA</td>
<td></td>
</tr>
<tr>
<td>Cable length: max. 50 meters, depending on installation topology and interference conditions; 10 m for inputs used as counters</td>
<td></td>
</tr>
<tr>
<td>Counters / frequency measurement: max. 25Hz</td>
<td></td>
</tr>
<tr>
<td>Analog inputs:</td>
<td>4 channels, 0...5 V or 0...10 V or 0...20 mA, input signals can be selected per channel</td>
</tr>
<tr>
<td>Input voltage: DC 0-10 V</td>
<td></td>
</tr>
<tr>
<td>Input current: DC 0-20 mA or DC 4-20 mA</td>
<td></td>
</tr>
<tr>
<td>Resolution: 10 Bit</td>
<td></td>
</tr>
<tr>
<td>Impedance voltage measurement: 150 kOhm</td>
<td></td>
</tr>
<tr>
<td>Impedance current measurement: 500 Ohm</td>
<td></td>
</tr>
</tbody>
</table>

| Outputs:            |              |
| Switch outputs:     | 6 channels, via potential-free contacts |
| At 230 V AC         | Up to 10 A per channel, cos phi = 1 |
| Incandescent lamps: | max. 1000 watt |
| Fluorescent lamps:  | max. 900 W |
| Capacitive load:    | 230 V AC, max. 4µF |
| Service life:       | 50,000 switching operations at rated load |
| At 24 V DC          | Up to 6 A |
| LED display:        |              |
| Binary inputs       | One yellow LED per input |
| Switch outputs      | One yellow LED per output |
| LAN                 | Yellow LED: Data traffic on LAN |
| LINK                | Yellow LED: Link active |
| ✈️                   | 1 green LED: Device occupies telephone line |
| ON                  | 1 green LED: Mains OK and device ready |
| Network connection: | RJ45 socket: Ethernet 10/100 Mbit |
| Telephone connection: | RJ45 socket: For ISDN connection (IN/S 1.1) |
|                      | For analog telephone connection (IN/S 2.1) |
| USB connection:     | 2 USB sockets (type A): For connection of the external video modules (e.g. VM/S 1.1) |
| Time synchronisation: | Real Time Clock: Battery backup, synchronisation during an Internet connection |
| Standards/norms:    | CE |
### 3.1.2 IN/S 3.1, IN/S 4.1

<table>
<thead>
<tr>
<th>Operating voltage:</th>
<th>12 – 24 V DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption:</td>
<td>approx. 8 watts</td>
</tr>
<tr>
<td>Mechanical data:</td>
<td>Dimensions (H x W x D): 86 x 157 x 58 mm (9 modules wide)</td>
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<tr>
<td></td>
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<td></td>
<td>Wire range: max. 2.5 mm²</td>
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<tr>
<td></td>
<td>Weight: 0.250 kg</td>
</tr>
<tr>
<td></td>
<td>Mounting: DIN rail in accordance with EN 50022</td>
</tr>
<tr>
<td>LED display:</td>
<td>LAN</td>
</tr>
<tr>
<td></td>
<td>LINK</td>
</tr>
<tr>
<td></td>
<td>✆</td>
</tr>
<tr>
<td></td>
<td>ON</td>
</tr>
<tr>
<td>EIB connection:</td>
<td>Plug-in terminal, 2-pole</td>
</tr>
<tr>
<td>Network connection:</td>
<td>RJ 45 socket</td>
</tr>
<tr>
<td>Telephone connection:</td>
<td>RJ 45 socket</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>USB connection:</td>
<td>2 USB sockets (type A)</td>
</tr>
<tr>
<td>Time synchronisation:</td>
<td>Real Time Clock: Battery backup, synchronisation during Internet connection</td>
</tr>
<tr>
<td>Standards/norms:</td>
<td>CE</td>
</tr>
</tbody>
</table>

### 3.2 Dimension drawing IN/S x.1

![Dimension drawing IN/S x.1](image_url)
3.3 Device connection

3.3.1 IN/S 1.1, IN/S 2.1

The IN/S requires an external supply voltage of 12 ... 24 V DC.

3.2.2 IN/S 3.1, IN/S 4.1
3.4 Description of inputs and outputs IN/S x.1

Supply voltage input (terminals 9 and 10)
The supply voltage of the IN/S is connected to terminals 9 and 10. Direct voltages between 12 and 24 V DC are permitted. Once the supply voltage has been connected, a start routine is executed in the device. As soon as it is ready for operation (approx. 40 s after connection to the supply), the ON LED on the top of the housing lights up.

⚠️ The supply voltage must lie between 12 V DC and 24 V DC. The device may otherwise be damaged.

USB connections
The IN/S has two USB interfaces (Universal Serial Bus) for the connection of system components such as video modules or other extension modules. USB offers the benefit that the power supply of the extension units is fed internally via the interface without any additional wiring required. USB devices also have ‘plug and play’ capability. You can simply connect USB extension modules to the IN/S without needing to download or activate drivers beforehand. The function of these devices is therefore immediately at your disposal.

Connect the USB devices before switching on the IN/S so that they can be detected correctly. If you wish to connect a device at a later date, switch off the IN/S and then switch it back on again.

LAN connection
The network connection is carried out via an Ethernet RJ 45 interface for LAN networks. The network interface with a transmission rate of 10 or 100 Mbit/s is available as standard. The network activity is indicated by an LED each for LINK and LAN located on the top of the housing.

Connection to a telephone network ☏
IN/S 1.1, IN/S 3.1
These IN/S are fitted with an ISDN modem and linked to the S0 bus of the ISDN using the cable supplied. Please note that an MSN (Multiple Subscriber Number) must be assigned for the IN/S – as for all devices on the ISDN. If the MSN is then addressed, the IN/S reacts to this number. You will find instructions on the assignment of the MSN in the documentation for your telephone system.

As soon as the device occupies a B channel of the ISDN, the ☏ LED on the top of the housing lights up.
3.4.1 IN/S 1.1, IN/S 2.1

These IN/S are fitted with an analog modem. The supplied adapter cable (RJ45 to RJ11) and the TAE adapter are provided for the connection of the IN/S to the TAE box. The ✂ LED lights up when the device occupies the telephone line.

Analog inputs (terminals 1 to 8)
The device has 4 analog inputs. 2 terminals are available per input (terminal pairs 1 – 2, 3 – 4, 5 – 6, 7 – 8). It can be defined in the parameter settings for each analog input whether it should be set for input signals of 0 … 5 V, 0 … 10 V or 0 … 20 mA (see chapter 5.4).
The measured values are digitalised in the device with a resolution of 10 bit.

Only a voltage or current that is within the permitted ranges may be applied to the analog inputs. The device may otherwise be damaged.

Binary inputs (terminals 11 to 22)
6 binary inputs are available for the connection of potential-free contacts. A terminal pair (11 – 12, 13 – 14, … 21 – 22) is used each time, whereby the ‘–’ terminals all have a common connection to earth (root). The binary inputs can also process pulse frequencies up to 25 Hz. The current status of the inputs is indicated by 6 LEDs located on the top of the housing.

No external voltage may be applied at the digital inputs. This can lead to the device being damaged.
**Internet Gateway**

**IN/S 1.1, IN/S 2.1, IN/S 3.1, IN/S 4.1**

**Switch outputs (terminals 23 to 24)**

It is possible to control 6 devices with the switch outputs of the IN/S. Each output can switch up to 10 A at 230 V AC. If 24 V direct voltage is switched, the maximum current may only reach 6 A. The current status of the outputs is indicated by 6 LEDs located on the top of the housing.

Miniature circuit-breakers should be used to fuse the switching circuits. A wide variety of circuit-breakers can be found in the ABB STÖTZ-KONTAKT product range.

You can configure the function and designation of the switch outputs individually. Further information and help can be found in chapter 6.4.

**3.4.2 IN/S 3.1, IN/S 4.1**

**EIB connection**

IN/S 3.1 and IN/S 4.1 have a connection to the European Installation Bus (EIB). The plug-in terminal supplied is used to connect the IN/S to an EIB installation. The polarity of the connection cables must be noted.

**4 Installation**

**Installing the IN/S**

First install the Internet Gateway on a suitable DIN rail.

**Connecting inputs/outputs**

Use the supplied plug-in terminals to wire the inputs and outputs. Note the description of the outputs given under chapter 3.4.

Do not plug the terminals of the inputs and outputs into the IN/S at this point. Complete the installation and initial commissioning (chapter 4 and 5) first.

**Linking the additional module VM/S (option)**

If you wish to use an additional module for video transfer, install this as far right as possible next to the IN/S. Then link the IN/S and VM/S via the supplied USB cable (IN/S: *USB 1* connection, VM/S: *USB* connection, see wiring diagram in chapter 3.3).

**Establishing communication links**

Next establish the communication links of the device i.e. the connection to the telephone network and/or the local network (LAN).

**Power supply**

Use the plug-in terminals to connect the supply voltage (12 … 24 V DC). If all the connections have been carried out correctly, you can switch on the supply voltage of the device.
5 Commissioning

5.1 Commissioning requirements

To put the IN/S into operation, you need:

\[
\text{either}
\]

\textbf{Variant 1}
- PC with Ethernet adapter (10/100 Mbit/s)
- Internet browser (MS Internet Explorer® from version 5.0 onwards or Netscape Communicator® from version 4.7x onwards)

\textit{or}

\textbf{Variant 2}
- PC with modem (ISDN or analog)
- Internet browser (MS Internet Explorer® from version 5.0 onwards or Netscape Communicator® from version 4.7x onwards)
- Internet access via an Internet Service Provider

We recommend that you use variant 1. If you wish to implement variant 2, please read the description in the appendix in chapter 8.2. The following descriptions refer to variant 1.

5.2 Configuration for commissioning access

To configure the IN/S during the commissioning phase, you must access the software of the IN/S. We therefore recommend the following procedure:

1. Use the network interface (connection: LAN) of the IN/S for a point-to-point connection to a computer with a network adapter via a crossover cable (red cable included with supply).
2. Switch on the IN/S.
3. Prepare the configuration PC as follows:
   (Further explanations about the flow diagram can be found in appendix 8.1).
1. Does the configuration PC already have an IP address?

2. Assign the IP address 192.168.0.1 to the commissioning PC.

3. Ensure that there is no dial-up link (modem) or proxy server in use.

4. Ensure that Java script is activated in your Internet browser.

5. Enter 'http://192.168.0.222' in the command line of your browser and then press the Return key.

Do you see the start page of the IN/S ?

yes

no

6. Enter your user name and password. *

Enjoy using the IN/S !

Switch on the IN/S and wait until the green ON LED lights up.

Is the IN/S switched on and is the green ON LED lit ?

yes

no

Do you receive a response to the ping ? (Can take several seconds)

no

Check the network cable between the IN/S and the PC. You must use a crossover cable (e.g. red cable included with supply).

Check whether a network with the corresponding drivers is installed on the configuration PC (see 8.1/1). If this is not the case, please contact your PC administrator or dealer.

Test with a ping command whether the IN/S and the PC are communicating with each other. Enter the following in the MS DOS input prompt: ping 192.168.0.222

Check the settings of the IP address again.

* An envelope containing the user name and password of the administration account for the initial commissioning is included with supply. You can use the ‘guest account’ as well.

Note:
A more detailed explanation of points 1 to 6 can be found in the appendix (chapter 9.1).
5.3 Configuration menu

If you have administrator rights, you can carry out the following settings under the Configuration menu of the IN/S.

5.3.1 Basic settings

Proceed as follows to select the Basic settings:
1. Click on Configuration in the start window of the IN/S
2. Another dialog window appears
3. Click on Basic settings
4. The Device data tab appears

5.3.1.1 Device data

The first item on this page is used to set the User interface i.e. all the pages displayed by the IN/S. You can choose between the English and other versions here.

Under Identification, you can first enter the telephone number of the device, including the dialling code and telephone number (for ISDN: complete MSN). You can also enter a Device name.
In the case of IN/S 3.1 and IN/S 4.1, the physical EIB device address can also be entered under Identification. After clicking on Save, the IN/S adopts this address.

The physical address of the IN/S cannot be assigned by ETS! The IN/S needs no ETS application. For calculation of the filter tables a Dummy application is available on our website www.abb.de/eib.

For the operation of the IN/S on the Network or for access by a PC with a crossover cable, the IP address and the network mask must be entered. For an IN/S PC connection with a crossover cable, it is not necessary to enter a standard gateway (000.000.000.000). The standard gateway must only be entered when operated in a network.

The Date and time of the device must be set so that the time-dependent functions can operate correctly. If you select the option Obtain date and time from domoport.com by placing a tick in the box, the device automatically receives the current time when connecting to domoport.

In order to be able to connect the IN/S with the Internet, the device must dial in via an Internet Service Provider (ISP). You can use the preselected provider (msn) or the same provider that you use for your PC when you connect to the ISP via a modem. You can set up your Internet Service Provider (ISP) in the Internet tab and enter your user account. To do so, you must be registered with an Internet Service Provider and know your user name. First enter the Phone number for dialling in to your ISP.
If you are operating the IN/S together with a telephone system (extension system), it might be necessary to add a dial prefix number, (e.g. 0) in addition to the telephone number of the ISP.

The pre-configured ISP (msn) is suitable for operation in Germany. Please enter a ISP of your country if outside Germany. Further information about ISPs can be obtained from a PC retailer.

With the entry fields User name and Password, the IN/S can be registered as an authorised user for the ISP. You can also preselect a Timeout (Auto hangup) after which the dial-up attempt is aborted. The default value is 5 minutes.

The next two lines are used to indicate the Domain Name Service (DNS) server. If you wish to use other servers than the default DNS in your network, ask your network administrator for the addresses of the DNS server.

If you use a broadband connection for Internet access (e.g. DSL), you also require a router. The connection to the ISP must then be set up for the router.

In this case, configure the IN/S as follows:
- Standard gateway = IP address of router
- Activate the option ‘Use standard gateway’
- The router must be set so that it routes ports 80, 81 and 5000 to the IP address of the IN/S (port forwarding)
If you would like the IN/S to send e-mail messages, you must carry out the following settings.

In the e-mail tab, you can select first of all how you wish to send e-mails. Under the item “e-mail deliveries via domoport”, various options are available for selection:

- **[Do not use]** This is the default setting and means that only the data of the ISP (Internet Service Provider) which you enter in the following section can be used.
- **[Use whenever external mail server fails]** This setting only activates distribution via the domoport if the e-mail cannot be sent to the ISP that has been set.
- **[Do only send via domoport]** This setting means that e-mails are only sent via the domoport. In this case, you must not enter the data of the ISP (SMTP/POP server).
- **[Send every mail twice (external and Domoprot)]** This means that an e-mail is always sent both via the ISP and the domoport.

Domoprot is a portal to the Internet which enables remote access to the IN/S from any Internet access point. As described above, it can also be used for e-mail distribution. To do so, it is necessary for you to register your IN/S with domoport. The registration process is described in chapter 5.10.2.
Furthermore, the URL (uniform record locator) of the SMTP (simple mail transfer program) server (e.g. smtp.provider.de) and the sender's address can be entered. As almost all ISPs demand a point of presence (POP) authentication for e-mail distribution, this option can be activated by a tick in the box provided. If the option has been activated, the URL of the POP server (e.g. pop3.provider.de), the User name and Password must also be entered.

5.4 Inputs/Outputs (only IN/S 1.1, IN/S 2.1)

The tab ‘In-/Outputs’ is only available with IN/S1.1 or IN/S2.1. After the initial connection with the device and basic settings, you should next assign parameters to the inputs and outputs which you have already wired onto the plug-in terminals.

1. Click on Configuration in the start window of the IN/S
2. A further selection window appears
3. Click on Inputs/Outputs
4. The menu Configuration of physical device connectors appears

![Diagram 5.4 Configuration of the inputs and outputs](image-url)
Follow the order of the page and first configure the digital inputs according to the wiring layout.

**Digital inputs**
You can decide for each digital input whether it should be displayed on the homepage of the device. The checkbox *Show* is available for this. If the checkbox is marked with a tick, the input is displayed. You can further assign a unique *Identifier* for each input. Depending on the function of the input, you should select the *Use* of the input from one of the options in the pull-down menu. If you have configured an input as a counter, you can display a *Button* for resetting the counter. Finally, it is possible to select a *Unit* for display on the homepage.

If you have carried out your settings, they must be stored on the IN/S. To do so, click on the *Save* button at the bottom of the page.

**Digital outputs**
It can also be selected for each digital output whether it should be displayed on the homepage of the device (*Show*) and how it should be labelled (*Identifier*). If a button should be available for the output for toggling, the option *Button* must be set to *Show*.

**Analog inputs**
Apart from the selection of the display (*Show*) and the designation, it is also possible to define the *Type* (voltage 0 … 5 V or 0 … 10 V or current 0/4 … 20 mA) for each analog input. This should always take place before the terminals have been plugged in. The *Unit* for each output can be indicated to provide information about the measurements. The *Factor* and *Offset* of the input are used to scale the measured variable. The integrated calculator is available for the convenient calculation of the offset and factor. To carry out a calculation, click on the button to the right of the corresponding analog input.

<table>
<thead>
<tr>
<th>No.</th>
<th>Show</th>
<th>Identifier</th>
<th>Type</th>
<th>Unit</th>
<th>Factor</th>
<th>Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>Temperature</td>
<td>Voltage 0-10 V</td>
<td>C</td>
<td>10</td>
<td>50</td>
</tr>
</tbody>
</table>
5.5 Data points (only IN/S 3.1, IN/S 4.1)

The menu item EIB data points is only available for IN/S 3.1 and IN/S 4.1. The data points which the IN/S should use are configured on the EIB (group addresses).

### Diagram 5.5: Configuration of the EIB data points

<table>
<thead>
<tr>
<th>No.</th>
<th>Show</th>
<th>Identifier</th>
<th>Group address(es)</th>
<th>Data type</th>
<th>Operation</th>
<th>Set value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>✔</td>
<td>E1</td>
<td>0/0/1</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
<tr>
<td>2.</td>
<td>✔</td>
<td>E2</td>
<td>0/0/2</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
<tr>
<td>3.</td>
<td>✔</td>
<td>E3</td>
<td>0/0/3</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
<tr>
<td>4.</td>
<td>✔</td>
<td>E4</td>
<td>0/0/4</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
<tr>
<td>5.</td>
<td>✔</td>
<td>E5</td>
<td>0/0/5</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
<tr>
<td>6.</td>
<td>✔</td>
<td>E6</td>
<td>0/0/6</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
<tr>
<td>7.</td>
<td>✔</td>
<td>E7</td>
<td>0/0/7</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
<tr>
<td>8.</td>
<td>✔</td>
<td>E8</td>
<td>0/0/3</td>
<td>EIS1 (Switching)</td>
<td>Value and button</td>
<td>✔</td>
</tr>
</tbody>
</table>

In the selection list EIB data points, you can first of all choose which range of data points you wish to edit (e.g. 1 – 32). There are 256 data points available in total.

Dis.: The IN/S indicates all the EIB data points on the homepage where the Disp. checkbox is activated. In the default setting, no Disp. checkboxes are activated; the IN/S does not display any data points on the device homepage.

Activate the Disp. checkbox. The IN/S displays the corresponding data point on the device homepage after saving the page.

or

Deactivate the Disp. checkbox. The IN/S deletes the corresponding data point from the device homepage after saving the page.

**Description:** The data points are not described in the default setting. Click in the Description field and enter a description for the data point or change an existing description.

**Group address(es):** During addressing, the EIB distinguishes between the physical address and the group address. The physical address is the unique name of the bus device and is indicated in the format Area.Line Device (e.g. 1.3.21). The group address defines the assignment for communication between bus devices. The IN/S also addresses a bus device via its group address(es). It is indicated in one of the two formats Main group/Subgroup (e.g. 1/17) or Main group/Middle group/Subgroup (e.g. 1/3/21).

You can also indicate 3 link addresses. The link addresses are used in addition for the value update of the object (object listens to several addresses). The following applies for link addresses: Main address; Link address(es) (e.g. 1/2/3 1/2/4 1/2/5).
Click in the Group address(es) field and enter a group address for the data point or modify an existing group address.

**Data type:** The Data type list is created as a drop-down list. A click on the arrow opens the list. In the default setting, all the data types are configured as EIS1 (Switching).

Click on the arrow in the Data type list. The IN/S opens the list. The entries in the Data type list are indicated in the EIS data types table.

Click on an entry in the Data type list. The IN/S configures the data point according to your selection.

### EIS data types

<table>
<thead>
<tr>
<th>EIS – EIB function</th>
<th>Description, application</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIS1 (Switching)</td>
<td>Switching functions on/off for light, boiler etc.</td>
</tr>
<tr>
<td>EIS2 (Dimming – value)</td>
<td>Dimmer functions on/off, brighter, darker, set to fixed value</td>
</tr>
<tr>
<td>EIS3 (Time)</td>
<td>Seconds, minutes, hours, day of the week</td>
</tr>
<tr>
<td>EIS4 (Date)</td>
<td>Day, month, year</td>
</tr>
<tr>
<td>EIS5 (Value)</td>
<td>16 bit floating point value for values such as temperature, brightness, flow rate</td>
</tr>
<tr>
<td>EIS6 (Scaling 0 – 100 %)</td>
<td>8 bit value between 0 % and 100 %</td>
</tr>
<tr>
<td>EIS6 (Scaling 0 – 360 °)</td>
<td>8 bit value between 0 ° and 360 °</td>
</tr>
<tr>
<td>EIS7 (Drive control)</td>
<td>Motor control stop, up, down, step</td>
</tr>
<tr>
<td>EIS8 (Priority – position)</td>
<td>EIS8 Subfunction for switching values on/off</td>
</tr>
<tr>
<td>EIS8 (Priority – control)</td>
<td>EIS8 Subfunction priority switch for &gt;Priority position&lt;; overwrites &gt;priority position&lt;</td>
</tr>
<tr>
<td>EIS9 (Float value)</td>
<td>32 bit floating point value for all physical variables (resolution in accordance with IEEE 754)</td>
</tr>
<tr>
<td>EIS10 (16 bit counter)</td>
<td>16 bit signed integer for count values</td>
</tr>
<tr>
<td>EIS10 (16 bit counter)</td>
<td>16 bit unsigned integer for count values</td>
</tr>
<tr>
<td>EIS11 (32 bit counter)</td>
<td>32 bit signed integer for count values</td>
</tr>
<tr>
<td>EIS11 (32 bit counter)</td>
<td>32 bit unsigned integer for count values</td>
</tr>
<tr>
<td>EIS13 (ASCII character)</td>
<td>8 bit ASCII character</td>
</tr>
<tr>
<td>EIS14 (8 bit counter)</td>
<td>8 bit signed integer for count values</td>
</tr>
<tr>
<td>EIS14 (8 bit counter)</td>
<td>8 bit unsigned integer for count values</td>
</tr>
</tbody>
</table>

**Operation:** Under Operation, you select how the IN/S represents the data point on the device homepage. The Operation list is created as a drop-down list. Click on the arrow in the Operation list.

The IN/S opens the list which contains the following entries:

- Value and button
- Value display only
- Button only

In the default setting, the option Value display only is selected. Click on an entry in the Operation list. The IN/S displays the data point according to your selection.
Set value: In the Set value field, you assign a default value to the button of the corresponding data point. You set a button for a data point in the Operation list.

If you do not enter a value in the Set value field, the IN/S displays a Value field on the device homepage, in which you can enter the corresponding Set value. With the Set button, you set the entered value.

Click in the Set value field and enter a default value for the corresponding data point.

Unit: Under Unit, you can enter a unit which is displayed behind the respective data point on the device homepage.

Click in the Unit field and enter the unit of measurement for the corresponding data point.

Init: When the device starts up (boots up), the IN/S reads out all the data points where the Init checkbox has been activated. The IN/S indicates the concrete values on the device homepage immediately after the device startup.

The Init checkbox is not activated in the default setting; the IN/S does not read out any data points when booting up.

Click on Save. The IN/S adopts and saves all the page settings.

‘Variables’ tab
You can define up to 32 device variables in the IN/S. Under the Variables tab, you are able to define each variable more precisely with display (Disp.), description, use and selection of the corresponding button.

‘Order’ tab
If you wish to change the order that the EIB objects are displayed or the titles on the homepage, a small editor is available on the Order page. Click on the Save button to store the data on the IN/S after a change.

5.6 EIB monitoring (only IN/S 3.1, IN/S 4.1)

The menu item EIB monitoring is only available for IN/S 3.1 and IN/S 4.1. The IN/S can address up to 256 EIB devices cyclically to check whether they are available on the EIB and to send reply telegrams. The IN/S scans the configured devices via their physical address and evaluates the reply telegram.
Monitoring: In the Monitoring tab, you set up the monitoring function of the EIB. The IN/S monitors the EIB devices, whereby it sends a query telegram to the physical address of an EIB device; a check of 256 devices thus lasts approx. 2 hours. The check then restarts. The scanning of the devices is carried out according to the order in the list. You can select which devices should be checked. The IN/S evaluates the reply telegrams of the EIB devices and indicates whether and when a device has been tested and which status it has. The IN/S writes the number of faulty devices in a freely definable variable.

Output of control information: The IN/S writes the number of faulty devices in a variable, which you select under Alarm variable.

The Alarm variable list is created as a drop-down list. A click on the arrow opens the list. No alarm variables are defined in the default setting.

Configuration and state: Under Configuration and state, you indicate which EIB devices are monitored and see which status they have.

Active: The IN/S monitors all EIB devices for which the Active checkbox has been activated. All Active checkboxes are activated in the default setting.

Address: Under Address, you indicate the physical address of the corresponding EIB device with the following format: [Area.Line.Device]. The physical address is required for querying the EIB device.

Checked: Under Checked, the IN/S indicates the time when the device was last checked.
**Internet Gateway**

**IN/S 1.1, IN/S 2.1, IN/S 3.1, IN/S 4.1**

**State:** Under state, the IN/S indicates the test status of the corresponding EIB devices as follows:

<table>
<thead>
<tr>
<th>Display</th>
<th>Device status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey LED</td>
<td>Device has not been tested yet</td>
</tr>
<tr>
<td>Green LED</td>
<td>Device is ready for operation</td>
</tr>
<tr>
<td>Red LED</td>
<td>Device is not ready for operation</td>
</tr>
</tbody>
</table>

The **Alarm variable** contains the number of faulty EIB devices. The variable can now be used directly as an alarm trigger as soon as a device fails. It can also be evaluated in the macro editor and transferred directly to the e-mailer. When a defined number of EIB devices fail, you can very simply send an alarm signal to a recipient who is responsible for alarm signals.

**5.7 User accounts**

32 local user accounts can be defined on each IN/S for LAN (local area network) access in order to regulate access to the device.

Under **Access levels**, you determine first for all the accounts which concrete operator rights should be linked with one of three authorisation levels. Specify the unique name and password which a user needs to gain access and select which access level is indicated.
In the section ‘Set up guest access’ you can configure, if you want to allow guest access and which access level the guest user has.

In the supplied state, the guest access has administrator rights in order to enable a rapid start of the commissioning process. You must change this access level if you are operating the IN/S on a network to which third parties also have access. To protect the IN/S from unauthorised access, you should only work with user names and passwords and block guest access by selecting the option [Not in use].

You can assign the following authorisation levels to the user: Administrator, Operator or Viewer. A user account with administrator rights (level 3) receives full access to the device including all the functions for both the basic configuration and the setup of the user accounts. The same device areas can be enabled in principle for the operator and the viewer – with the exception of the basic configuration. There is however a basic difference in the access rights: only operators (level 2) have the option of active intervention in the device functions, carrying out switching operations on the homepage or modifying timer programs. Enabled areas can indeed be retrieved in their current state by users with viewer rights (level 1) but not switched or modified. A visible limitation in this case is the omission of all the function buttons in the user interface.

The accounts for Internet access to the device are managed by you as shared user accounts for the domoport Internet Service Provider. There is no direct connection to the local user accounts for LAN access. If a user gains access to the device via an Internet connection, the authorisation level that has been configured on the web is however transferred and reproduced in the enabled areas which have been configured here.
Once the user accounts have been set up, you should modify the default password of the user account 'Admin' so that no-one with knowledge of this password can access the device.

### 5.8 Linked devices

Due to its gateway function, the Internet Gateway is able to allow access for up to 32 LAN networked devices externally via a single Internet connection. You set up web access to the device with telephone/Internet access via domoport and define that linked devices that are networked via the Ethernet can pass through the gateway. It is not necessary to configure the user accounts on the connected devices as the rights of the current user (administrator, operator or viewer) are passed on between the devices when accessing via the Internet.

<table>
<thead>
<tr>
<th>No.</th>
<th>Identifier</th>
<th>Local IP address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IN/S Installation 2</td>
<td>192.168.0.234</td>
</tr>
<tr>
<td>2</td>
<td>Webcam 1</td>
<td>192.168.0.123</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Diagram 5.8 Cascading of devices**

Access to third party devices on the LAN, web cams or other devices with their own web server can be implemented with the help of the gateway function of the IN/S. By activating the checkbox *Access requires local registration*, you can achieve the situation that all users who can be cascaded from this IN/S to a further IN/S (e.g. IN/S installation 2) must also log onto the second device with a user name and password.

To create a link to another device on the LAN, first enter a description (e.g. web cam) and then add the *Local IP address* of the device.

After clicking on Save, the IN/S recreates the left menu bar and adds the menu item *Links*. You can now retrieve linked devices.
5.9 System functions

Parts of the IN/S can be reset to the initial values using the system functions. You can therefore delete settings without having to retrieve all the sections individually.

5.9.1 Initial values

You can select the sections which you would like to reset by entering a tick in the corresponding checkboxes on the Initial values page. A click on the Reset button restores all the selected sections to their original state.

5.9.2 Reboot

It is possible to carry out a reboot on this page. This function is mainly used for a remote restart (e.g. via domoport). If you click on the button do reboot, the current connection with the IN/S is interrupted and the RAM of the device is deleted (camera images, historical data). You must retrieve the start page of the IN/S again in the browser after the restart (ON LED lights up again).

5.9.3 Update

The direct online check for available updates can be triggered on the Update page. If the search is successful, detailed information about the update is displayed. By pressing the update button again, you trigger the download and update procedures which lead to a reset with automatic restart (see 5.9.2) of the device on completion.
5.10 Initial configuration for remote access

In the initial state, you receive the IN/S with several, preconfigured settings. You must carry out further settings depending on how you use the IN/S. The following overview shows you which settings are required for which application.

<table>
<thead>
<tr>
<th>Application</th>
<th>Required configuration</th>
<th>See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone connection only (ISDN or analog)</td>
<td>ISP, domoport</td>
<td>5.3.1.2 and 6.4.3</td>
</tr>
<tr>
<td>LAN only</td>
<td>IP address</td>
<td>5.10.1</td>
</tr>
<tr>
<td>Telephone connection and LAN</td>
<td>ISP, IP address, domoport</td>
<td>5.10.1, 5.3.1.2 and 6.4.3</td>
</tr>
</tbody>
</table>

ISP = Internet Service Provider

5.10.1 Assignment of the IP address

The IP (Internet Protocol) address is the unique address of the IN/S within the local network (LAN).

The following IP address is set for the IN/S in the default state:
- IP address: 192.168.0.222
- Network mask: 255.255.255.0

You can access the device directly via these preset options in order to modify the settings or to configure the IN/S. The PC which you use to access the IN/S and the IN/S itself must be located in the same physical and logical network segment.

The first three number blocks of the IP address must therefore match. The last number block can vary in the range between 1 and 254.

Example:
- IP address of PC: 192.168.0.1
- IP address of IN/S: 192.168.0.222

⚠️ If the preset IP has already been allocated in your network, you cannot access the IN/S with this IP address.

Modify the IP address of the IN/S via a point-to-point connection with the crossover cable (included with supply, red cable). Retrieve the Configuration menu item and click on Basic settings. You can set the IP address in the Network settings.

5.10.2 Initial domoport registration

You thus register your IN/S with the domoport Internet Service Provider:

1. Open the portal page www.domoport.com with your browser.
   - Click on Register now! in the login window. Domoport opens the page Registration of a domoport main user account with IN/S device data.

2. Device data:
   - Enter the serial number (SN), PIN and telephone number of the IN/S and select a suitable device name (e.g. Holiday home).
   - The serial number (SN) is located directly on the IN/S housing.
   - The PIN is in the security field on the domoport registration form [in the envelope supplied].
The registration form was supplied together with your IN/S. The SN and PIN are only required for the initial registration of the device; afterwards you select a user name and password of your choice for dial-up.

3. Registration:
   Enter a suitable main user name (e.g. Robert Smith) and a password.
   \[\text{!}\]
   The main user name is also the name of the main user account. The main user name cannot be modified at a later date.

4. Click on Register. Domoport opens the Registration page where you can enter your personal contact details.

5. Domoport checks your entry and stores your data. You have thus registered your IN/S with the domport Internet Service Provider. You can now access your domoport main user account with the help of your main user name and password.
6 Function and operation

The operation of the Internet Gateway is only carried out via a browser (e.g. MS Internet Explorer® or Netscape Communicator®). You have several options for accessing the IN/S:

1. Via a point-to-point connection with a PC (see 6.4.1)
2. Via a network (e.g. LAN) in which you address the IN/S via an IP address (see 6.4.2)
3. Via an Internet connection with the service provider www.domoport.com (see 6.4.3)

6.1 Operating elements

As operation is carried out via a browser, there are no operating elements on the Internet Gateway.

6.2 Display elements

Several LED displays are visible on the IN/S. They have the following meaning:

- **LAN**: Flashes or lights up if the device detects activity on the network (e.g. during data exchange)
- **LINK**: Lights up if the device detects a connection to a network
- **✆**: Lights up if the device has established a telephone connection
- **ON**: Lights up if the power supply is present and the device is ready for operation (approx. 40 s after connecting the supply voltage)

**LED for binary inputs (only IN/S 1.1, IN/S 2.1):**

If the device detects the status 'logical 1' at one of the input terminals of the binary inputs (E … J), the LED of the respective input (E … J) lights up.

**LED for switch outputs (only IN/S 1.1, IN/S 2.1):**

If a switch output (K … P) is operated by the device, the corresponding LED is also switched on (K … P).
The IN/S has an integrated web server. This means that all the pages that can be retrieved by the user are stored on the IN/S. The user therefore always sees the same user interface (pages), regardless of whether he is accessing the IN/S locally with a PC or is connected to the device via the Internet.

The menu items on the left-hand side of the window are dependent on the user rights. The Configuration menu for example is only displayed for users with administrator rights.

The following chapters describe the menu items which are available for each user group:

6.3.1 Menu items for the viewer
6.3.2 Menu items for the user
6.3.3 Menu items for the administrator
The operation of the device is always carried out via a browser, both when accessing the IN/S via the Internet (via the service provider www.domoport.com) and via the LAN.

6.3.1 LAN access

For LAN access a login is required. To do so, you must enter a user name and password that is known to the device. New users and passwords can only be assigned by a user with administrator rights.

After a successful login, the device homepage appears (see 6.3.1).

6.3.2 Internet access

When accessing an IN/S device via the Internet, it is necessary to carry out a registration on the domoport homepage. If this was successful, all the IN/S devices (if several are available) which have been assigned to the user are displayed. If the user selects an IN/S for connection, the device is called up and the user is linked with the device. The device homepage then likewise opens. Details about connection to the IN/S via the domoport can be found in chapter 6.4.3.
### 6.3.1.3 Homepage of the viewer

The device homepage offers the user with viewer rights an overview of the current states of the inputs and outputs of the device.

Apart from the status of the inputs and outputs, the current value of the variables can also be displayed.

![Diagram 6.3.1.3 Homepage of the viewer](image)

The arrangement of the elements on the device homepage can be adapted individually. Diagram 6.3.1.3 indicates for example only 3 inputs and 2 outputs.
If the user selects the menu item Video, the current video images of a selectable video source is displayed (if available). The Video source and the Size of live image be selected.

In addition to the current camera image, an image can also be retrieved from memory.

In order to retrieve an image from memory, either select an image directly under Video source or select pictures store. With the navigation buttons, you can jump to the next/previous image (/><) or the first/last image ((<>/>).
6.3.1.5 History

If the user wishes to reproduce the history of inputs or outputs, he can choose preselected values for display under the menu item History (Set-up tab). The time range can also be specified. The current graph is displayed when the menu item is selected. To update the graph, click on the button Show graph.

6.3.1.6 Log off

By clicking on the menu item Log off, the user can end the connection with the IN/S. This menu item should always be selected to exit.
6.3.2 Operation in the browser window

If a user should also operate the device, he needs the rights of the ‘user’ level. This user can carry out all the actions that the viewer can perform (6.3.1). He is however also able to operate the device and carry out settings. The administrator can however limit or extend the rights of the user. If the functions described here are not available to you, contact the administrator of the device.

As all the pages are stored on the IN/S, changes in the settings that have been carried out in the browser window are always transferred to the IN/S. To do so, always use the command button ‘Save’ on the corresponding page (e.g. timer).

6.3.2.1 Homepage of the user

In contrast to the viewer, the user can also give commands to the IN/S on the homepage (see Diagram 6.3.2.1). He is able for example to reset a counter which is described by an analog input (Reset button) or toggle a switch output (Switch button).

If a state arises which requires a message to be sent, it is indicated on the homepage of the IN/S that a Message chain is active.
This message can be stopped by clicking on the **Reset** button. The chain is then no longer displayed on the homepage.

From the **Operator** access level, the additional **Info** tab appears under the homepage menu item. The current device configuration (hardware/software) is displayed and the number of connected USB devices (e.g. VM/S) is represented. It is also possible to view the system events in the log book.

The logbook records all events, e.g. the log in of users, changes in the configuration or triggered actions like E-mail notification. For debugging the logbook can give hints about errors occurred (e.g. phone line not available).
With the *Timer* function, 32 timer programs are available for the automatic triggering of recurring switching operations. An active timer program can switch digital outputs, programmable variables or send EIB telegrams (IN/S 3.1, IN/S 4.1) on or off. You can select the objects that should be set by a switching program by clicking with the mouse in the list field under *Assign switch objects*. You can select several entries by pressing and holding down the Ctrl key.

You can define separately for each activated program on which weekdays it is carried out and when the assigned switch objects should be switched on (specified ON time) and/or switched off (specified OFF time). The set periods are permanently compared with the current device time; if they match, an ON/OFF switching operation is carried out in the relevant program exactly on the active day. If you define an ON or OFF time prior to the current device time, it is not carried out until the next day.

Exception days, which must be defined on the page with the same name in the functional range of the timer, have particular significance. You can define Bank Holidays here or periods that cover several days, such as factory shutdown, which require special treatment. The exception days apply for all 32 timer programs.

The time switch program must be activated before it can be executed. The activation is carried out via the option field *Program active* (tick box).
In the Programs window of the e-mailer menu item, there are 32 message programs available for the automatic transmission of freely selectable text messages of up to 200 characters in length. The Trigger object for sending the message can be the activation of a digital input on the device (IN/S 1.1, IN/S 2.1), one of the programmable variables or an EIB telegram (IN/S 3.1, IN/S 4.1). You can send up to 5 attachments with an e-mail:

- Current state of all values on the device homepage (text file)
- Log file of the system events (text file)
- Historic data recorded up to transmission as a graphic
- Historic data recorded up to transmission as a text file
- The last recorded camera image (in '.jpg' format)

Up to 32 message receivers can be set up on the Receivers configuration page. All the configured receivers appear on the Programs page in the list field under Assign message receivers and can be allocated to the respective program via a mouse click. You can select several receivers for a message by pressing and holding down the Ctrl key.

The Message chain has the task of informing several receivers at staggered intervals. It is composed of all the receivers that have been set in the option Use in message chain (on the Receivers page). The text of the trigger message program is sent to all the receivers involved in the chain one after the other in configurable intervals, if the message chain has been selected as a receiver when configuring the program.
For this purpose, an existing chain is displayed as its own receiver entry in the list field Assign message receivers. If a message chain is active, this is indicated on the device homepage. Any user with operator rights can stop the message chain by clicking on the Reset button.

The sending of text messages to mobile devices is achieved by using a special service from telephone service providers. A text message to the number 01 72/1 23 45 67 in the german D2 network for example is generated via e-mail to the address 01721234567@d2-message.de which must be set up as a message receiver on the Receivers page.

If an e-mail is sent as a text message (SMS), only the subject line of the e-mail is transmitted as text in the text message. Enter the text in the description field of the e-mailer which should appear in the text message (corresponds to the subject line of the email).

Please note that the receipt of e-mail messages as text messages on mobile phones must in most cases be explicitly enabled by the receiver and incurs additional costs. The receipt of file attachments is not a good idea and currently only possible on a few mobile devices.

If the IN/S cannot send e-mails (e.g. if the telephone connection is busy), they are stored in a buffer and an attempt is made every 5 minutes to send the e-mail. After 25 unsuccessful attempts, the e-mail is deleted from the buffer. The e-mails in the queue are displayed on the homepage in the Info tab.
This menu item is only displayed if feedthrough from the IN/S to another IN/S or another device has been parameterised.

The function Select device enables the connection (feedthrough) to another device on the LAN via the IN/S. In this operating mode, the IN/S functions as a gateway and passes the data from and to the other device.

By clicking on Select device in the toolbar on the left-hand side of the window, a submenu (pop-up) opens which displays all the devices that are configured for feedthrough. After clicking on one of the devices in the pop-up window, the linked device is accessed and the window contents are replaced by the contents of the new device. If you wish to connect to another IN/S, you can also switch back to the previous IN/S. You achieve this by clicking on the additional entry Dial-up device while feedthrough is active in the submenu Select device. Chapter 5.6 provides information about how to set up the devices for access via the IN/S.

Apart from the Info tab under the homepage menu item (see 6.3.2.1), further tabs are available to users of the Operator access level which are not displayed to users of the Viewer access level.

**Set up video sources**

**Select video source**

- **USB camera 1: Büro**

**Identifier**

- Büro

**Type of camera**

- Color

**Trigger for snapshot**

- [Not in use]

**Time controlled snapshots**

- Every 15 minutes

**Reference time**

- 06:00

**Insert information into images**

- Date and time stamp
- Device name
- Name of video source

**Actions**

- Empty image store
- Delete
- Save
First select under Select *video source* which USB camera you wish to configure. Then enter a name under *Identifier* (e.g. office). To activate the camera and display the image, mark the checkbox *Use this camera*. With *Type of camera* and *Rotate video image*, you can select the representation that you require. If you wish to record an image dependent on an event (e.g. opening a door), select that as *Trigger snapshot*. You can also record images in a defined rhythm with the function *Time-controlled snapshot*. The *Reference time* indicates the period from which the recording should start. For information, you can insert the date and time stamp, device name and/or the description of the video source directly in the image.

**Setup tab under the History menu item**
The data which should be displayed under History can be selected in the *Setup* tab.

<table>
<thead>
<tr>
<th>Sources for data recording</th>
<th>Show in e-mail history graph</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 014:2_Both_1</td>
<td></td>
</tr>
<tr>
<td>2. 008:8</td>
<td></td>
</tr>
<tr>
<td>3. [Not in use]</td>
<td></td>
</tr>
<tr>
<td>4. [Not in use]</td>
<td></td>
</tr>
<tr>
<td>5. [Not in use]</td>
<td></td>
</tr>
<tr>
<td>6. [Not in use]</td>
<td></td>
</tr>
</tbody>
</table>

**Trigger for data recording**

- [Not in use]

**Time controlled data recording**

- 10 seconds
- Reference time: 00:00:00

**File size as e-mail attachment**

- Datasets attached to e-mail: 2.000

First select which data should be recorded for each channel (1 – 6). You can then select whether an event should be a *Trigger data recording* or whether you permanently require a *Time-controlled recording*. If you wish to send the results of the recording as an e-mail, you can select under *File size as e-mail attachment* how many data sets you wish to send.
Beyond the layout and operation, users with administrator rights can carry out further functions which are reserved for administrators (see Diagram 6.3.3).

The initial configuration of the IN/S must be carried out by a user with administrator rights. A detailed description of this initial configuration can be found in chapter 5 ‘Commissioning’.

The administrator is also able to create macros.
6.3.3.1 Macros

The term 'macro' stands for a closed, freely definable sequence in which simple queries and the setting of device values can be linked with time conditions, value comparisons, arithmetic functions and many more.

The Macros menu item offers a two-step concept:

- You first select a memory location from the 16 available, allocate an appropriate identifier and an optional short description and save the settings. You then switch from this prepared memory location to the script editor via the Edit button.

- The script editor is the interface for creating scripts. When a macro memory location is deleted, the associated script is also deleted. The identifier and short description of the macro are reset to the default values.
The script editor is divided into two areas. On the left is the editing environment while the palettes with the individual macro functions are located on the right.

The editing environment has 15x15 square function fields which are arranged like a chessboard. Each function field can adopt a macro function from the palettes. To edit scripts, mark a function field with a mouse click and then select a macro function from the palettes. The IN/S inserts the selected macro function in the marked function field. Each macro function which you insert represents a step in the sequence of an automated functionality. Through the logical connection of the individual macro functions in the script editor, you graphically program an automated sequence program, module by module. The palettes offer comprehensive functions for scanning or setting device values as well as mathematical and logical operators. You link the script modules via so-called connectors and distributors. The completed macro is finally a chain of script modules to a sequence diagram, similar to an electrical circuit diagram.

Interactive Help function: By moving over the macro functions with the mouse, appropriate help information is displayed in the field Interactive Help function.

Macro functions

- **Value access:**
  - **Timer value:** Issues selectable timing information as an integer
  - **Listen to EIB value:** Issues an EIB data point value according to the last detected EIB telegram.
  - **EIB telegram:** Signals the occurrence of an EIB telegram by issuing a TRUE (1) state, independent of the value of the telegram.
  - **Set EIB value:** Writing an EIB data point value, whereby the telegram transmission is triggered by a boolean TRUE (1) state at the upper input of the function.
  - **Read variable:** Reading out a variable value as a floating point value, which can also be used as a boolean operator.
  - **Set variable:** Sets a variable value as a floating point value or boolean value, whereby TRUE is saved as 1 and FALSE is stored as 0.
**Read constant**: With the constant, you insert an adjustable count value in the data flow which cannot be modified via script.

**Arithmetic:**
- **Addition**: Total of two input values which can be floating point values or boolean states.
- **Subtraction**: Differential of two input values which can be floating point values or boolean states.
- **Multiplication**: Product of two input values which can be floating point values or boolean states.
- **Division**: Quotient of two input values which can be floating point values or boolean states.
- **Modulo operator**: Calculates the integer residual R of the division of A / B or B / A depending on the selected configuration.

**Logic:**
- **AND**: AND combination of two boolean values: only if both inputs are TRUE, the result is TRUE, otherwise FALSE.
- **Or**: OR combination of two boolean values; as soon as one or both inputs are TRUE, the result is TRUE, otherwise FALSE.
- **Not**: Negation of a boolean input value: TRUE is after FALSE, vice versa FALSE is after TRUE.
- **COMPARE**: Comparison of two values: depending on the configuration, the function issues TRUE (1) if A is less than B, A is identical to B or A is greater than B, otherwise FALSE (0).
- **Condition**: Limited selection among two values: If TRUE is at the selected output, the configured input value is issued, otherwise the other is issued.

**Pulse edge control**
- **Positively triggered**: The created value changes from boolean FALSE (0) to TRUE (1) if exactly one TRUE pulse is issued, then continuously FALSE again.
- **Negatively triggered**: The created value changes from boolean TRUE (1) to FALSE (0) if exactly one TRUE pulse is issued, then continuously FALSE again.
- **Monoflop output**: Reading out the associated monoflop input.
- **Monoflop input**: Initiates a definable TRUE state of an adjustable duration (in seconds) as soon as the input changes to TRUE.
Comparator: Routes any values from the output of a script function to the input of the next function.

Distributor: Distributes any values from the output of a function to the inputs of further script functions. The distribution is carried out in principle from left to right.

Macro examples

Legend:
- **EIB** EIB objects e.g. >EIB object 1<
- **Val** Value e.g. >Value 1<
- **Var** Variable e.g. >Variable 1<
- **Con** Constant e.g. >Constant value 1<

Simple telegram routing: A telegram that arrives for EIB object 1 is immediately routed to EIB object 2.

Telegram routing to 3 EIB objects: Each telegram that object 1 receives is routed as a write telegram to objects 1, 2 and 3.

Lightscene: If you click on the button for variable 1 on the homepage, the IN/S sends three preset values (value 1, 2 and 3) to three different EIB objects (EIB object 1, 2 and 3). With this macro, you can switch a variety of EIB objects at the same time. After switching, variable 1 is immediately reset to the value >0<. You thus receive a push button function which prevents permanent writing on the bus.
Value monitoring: If the value of EIB object 1 exceeds or falls below a preset value 1, the IN/S sends a telegram with the preset value 2 to EIB object 2.

Attention: An EIB object may not be described by different places as it otherwise leads to an internal conflict with the result that the IN/S only carries out the last command. This rule applies both for the multiple description of an EIB object within one macro and within different macros. In the example, only variable 2 would cause a switching process at EIB object 2. The correct solution is shown in the next example >Two switching states at one EIB object<.

Two switching states at one EIB object: If you click on variable 1 on the device homepage, the IN/S writes value 2 to EIB object 1. If you click on variable 2 on the device homepage, the IN/S writes value 2 to EIB object 1. A push button function resets the values of variables 1 and 2. The IN/S thereby describes variables with the constant value >0<.

Clock deviation of an EIS 3 object: If the time of EIB object 1 (EIS3) deviates by more than 10 s from the system time of the IN/S, the IN/S sends a telegram with the current time to EIB object 1.

Regular clock deviation: The IN/S sends a telegram every 60 s with the current device time to EIB object 1.

Alarm mail for faulty EIB devices: The EIB device monitoring of the IN/S (under Configuration -> EIB monitoring) only generates an alarm signal via the adjustable alarm variable for the first faulty EIB device. The macro on the right generates an alarm signal for every defective EIB device which the IN/S detects. The IN/S signals newly detected faulty devices via variable 3. You must select variable 1 in the device monitoring as an alarm variable.

Soft dimmer: If you click on the button Variable 3 on the device homepage, the IN/S sends slowly increasing values (between 0 and 100) in a 4 Hz rhythm with a selectable step width (in this case >5<) to EIB object 1. If the IN/S reaches the value >100<, the process stops until you click on the button Variable 3 again. An OFF dimmer can be programmed in the same way.
6.4 Access options

The following possibilities are available for accessing the IN/S:

6.4.1 Point-to-point connection with a PC

The point-to-point connection with a PC is suitable for the initial configuration (see chapter 5) or for local access:

- Take the crossover cable (red cable included with supply).
- Link the network connection of the PC to the LAN connection of the IN/S using the crossover cable.

Ensure that the PC has been configured according to the description in chapter 5.2

- Open a browser on the PC.
- Call up the start page of the IN/S by entering the IP address: http://192.168.0.222 (default setting)
- The start page of the IN/S opens.
- Enter your user name and password.
- The homepage of the IN/S opens.

6.4.2 Network (LAN) connection with a PC

You can also operate the IN/S in a PC network and access the IN/S from a PC on the network:

- Take the patch cable (grey cable included with supply).
- Link the LAN connection of the IN/S with a free network connection (hub, network box) using the patch cable.

Ensure that the PC has been configured according to the description in chapter 5.2

- Open a browser on the PC.
- Call up the start page of the IN/S by entering the IP address: http://192.168.0.222 (default setting) or ask the network administrator for the address of the IN/S.
- The start page of the IN/S opens.
- Enter your user name and password.
- The homepage of the IN/S opens.

6.4.3 Access via domoport

If you wish to access the IN/S remotely, the homepage www.domoport.de or www.domoport.com is available. A prerequisite for access via domoport is a valid user name and password. This data must be stored in domoport. The initial domoport registration is described in chapter 5.8.2. Proceed as follows to use domoport:

- Open a browser on any device with Internet access.
- Open the homepage www.domoport.de or www.domoport.com
- The domoport start page opens.
- Enter your user name and password and click on Log on.
- Click on Select device.
- Select an IN/S from the list.
- Click on Connect.
- Connection with the IN/S is established and the familiar homepage of the IN/S is displayed. This process can take up to 1 minute with the IN/S 2.1 (IN/S 4.1).
Domopart also offers WAP access to the IN/S. The WAP pages are optimised for display on a mobile phone or PDA. You can use the following addresses to retrieve the domopart start page:

http://www.domopart.de/wap
http://www.domopart.com/wap

The Internet Gateway IN/S can be used in all situations that require an uncomplicated and cost-effective solution for remote monitoring and control. The Internet Gateway covers a wide variety of applications ranging from the residential sector, to small commercial buildings, right up to technical building management.

The following selection gives you an idea of the functional areas that the Internet Gateway can be used in:

- Electrical installations and systems
- Heating, ventilation and air-conditioning
- Wind and solar power installations
- Co-generation systems, fuel cell installations
- Security systems
- IT systems
- Data acquisition from company branches

An interesting application is the use of the IN/S in company branches. The data from these branches can be recorded by the IN/S and evaluated at a central location.
7.2 Operation of the IN/S

The IN/S can be operated with a power supply unit without any further devices. It is then connected to either the LAN, the telephone network or both.

7.3 IN/S in connection with the Video Module VM/S

If live video images should be transmitted from an installation, the video module VM/S can be connected to the IN/S. A camera is also required which supplies a PAL/NTSC signal with 1 Vss at 75 ohm. This camera is connected to the video module.

![IN/S and Video Module Connection Diagram]

7.4 Cascading of devices

If several IN/S devices are required in a building or an installation, they can be cascaded.

It is then sufficient to link one device with a telephone connection. This device can then address the other devices via the local network (LAN) and make the feedthrough available to these devices (see also chapter 5.8).

8 Appendix

8.1 Explanations for the configuration of the commissioning PC

The steps for configuring the commissioning PC from chapter 5.2 are explained in more detail in the following section. The settings vary depending on the operating system used (WIN 98, WIN2000, WIN XP, ...). The explanations have been created using the WINDOWS 98 operating system.

1. Does the configuration PC already have an IP address?

The IP (internet protocol) address is the unique identifier of a device in a network (similar to a house number).

You can set this address in the control panel of the operating system (Start/Settings/Control Panel). Then click on the ‘Network’ icon (double-click).
The following window appears:

Select the TCP/IP components from the list of network components and click on ‘Properties’.

The next window indicates the IP address of the PC:

2. Give the configuration PC the IP address 192.168.0.1
Select ‘Specify an IP address’ and enter the IP address and subnet mask as displayed in the diagram.
Click on OK.
Some operating systems require a restart of the system. If this is the case, please carry out a restart.

3. Ensure that neither a dial-up connection (modem) nor a proxy server are used.
Switch on the option ‘Never dial a connection’ in the configuration of your browser and switch off the option ‘Use a proxy server’. Proceed as follows for Internet Explorer™:
Start MS Internet Explorer™.
Select from the menu bar ‘Tools/Internet Options’.
The following pop-up window appears:

If you have not installed a dial-up adapter network, you cannot select a dial-up connection. In this case, the option ‘Never dial a connection’ is automatically activated.
Click on ‘Connections’ in the pop-up window followed by ‘LAN Settings’.
The following window appears:

Ensure that the option ‘Use a proxy server’ is not selected (as shown in the diagram above).
If you would however like to use a proxy server, you can bypass the proxy server for the address of the IN/S. This setting can be found under the ‘Advanced’ button.

4. Ensure that Java script is activated in your Internet browser.
Set the option ‘Use Java script’ in the configuration of your browser. In the case of Internet Explorer, these settings can likewise be found under the ‘Internet Options’. Click on the ‘Advanced’ tab. Search for the entry for Java settings in the list box (the exact designation depends on the version of the browser) and activate the Java script:

Depending on the version of your browser, the settings may be located under Java VM (instead of Microsoft VM). If you do not find these settings, Java script is generally activated.

5. Enter http://192.168.0.222 in the command line of your browser and press the Return key.
8.2 Configuration link via the Internet

The basis for the configuration of the IN/S via the Internet is the initial domoport registration (see chapter 5.10.2).

You must then enter a user name and administrator password to be able to configure the IN/S.

- Open a browser on any device with Internet access
- Open the homepage www.domport.de or www.domoport.com
- The domoport start page opens
- Enter your user name and password
  (users must have administrator rights)
- Click on ‘Select device’
- Select an IN/S device from the list
- Click on ‘Connect’
- Connection with the IN/S is established and the homepage of the IN/S appears
- Click on the menu item ‘Configuration’ and carry out the configuration of the device (see chapter 5.3 to 5.9)

To finish, click on ‘Log off’.

8.3 Ordering information

<table>
<thead>
<tr>
<th>Description</th>
<th>Ordering info.</th>
<th>Short code</th>
<th>Product code</th>
<th>bbn 40 11617</th>
<th>Unit weight in kg</th>
<th>Packing Unit</th>
</tr>
</thead>
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<td>IN/S 1.1</td>
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<td>55311 7</td>
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<td></td>
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<td>GH Q605 0065 R0001</td>
<td>55312 4</td>
<td>0.25</td>
<td>1</td>
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</tr>
<tr>
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<td>GH Q605 0068 R0001</td>
<td>58302 2</td>
<td>0.25</td>
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</tr>
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<td>GH Q605 0069 R0001</td>
<td>58303 9</td>
<td>0.25</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Accessories

- Video module VM/S 1.1
  GH Q605 0066 R0001 55313 1 0.15 1
- Power Supply Unit, 24 VDC, 0.8 A NT/S 24.800
  GH Q605 0057 R0002 51468 2 0.2 1