BAB TECHNOLOGIE GmbH

SMART DOTS
Documentation

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SMART DOTS

On the glass front of the **SMART**SURFACE there are a total of six so-called "SMART DOTS". The "SMART DOTS" are capacitive pushbuttons which are mounted behind the glass frame.

Four of these buttons are freely configurable and can be assigned useful functions. For example, scenes such as "Coming Home" or "Leaving Home" can be called without first starting visualization.
The four buttons can also be assigned a meaningful icon. This icon appears when pressed or when you approach the **SMART**SURFACE.
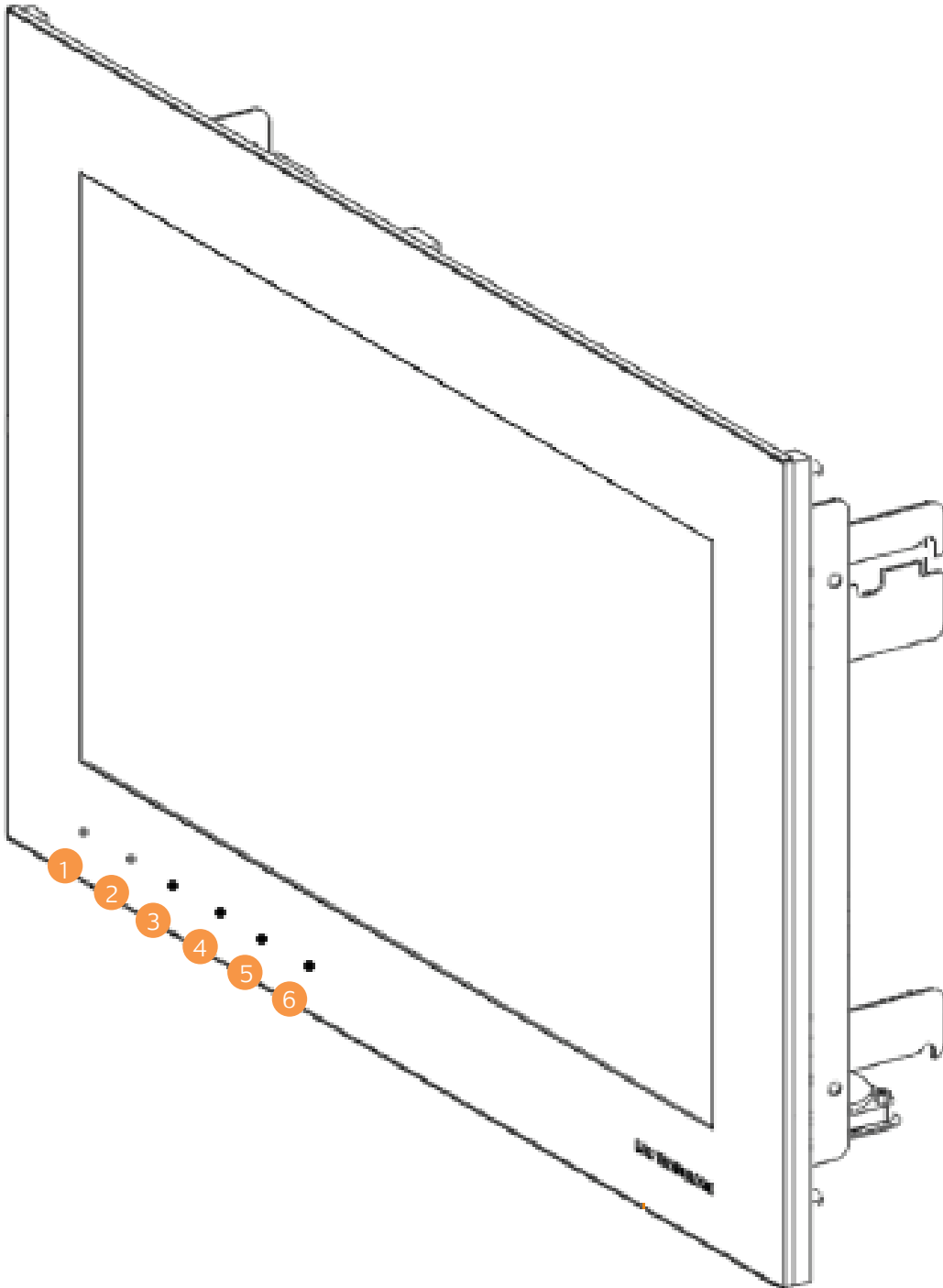
Two additional (unmarked) buttons allow controlling the display brightness and power on and off the **SMART**SURFACE. So you can switch the **SMART**SURFACE on and off or change the display brightness without removing it.

With the integrated configuration software "Smartdot Configuration" (pre-installed on the **SMART**SURFACE) you can assign the desired functions to the four freely configurable buttons (no. 3-6). Numerous additional icons are available for labelling the functions. The icons are displayed as soon as the presence detector of the **SMART**SURFACE detects movement.

The setup of the "SMART DOTS" is divided into **hardware** and **software** areas.

1   »SMART DOTS« CONFIGURATION SOFTWARE

First, the location of the SMART DOTS buttons.

The first two buttons (1-2) are not marked with the "orientation" points by dots on the frame, like the other four buttons.

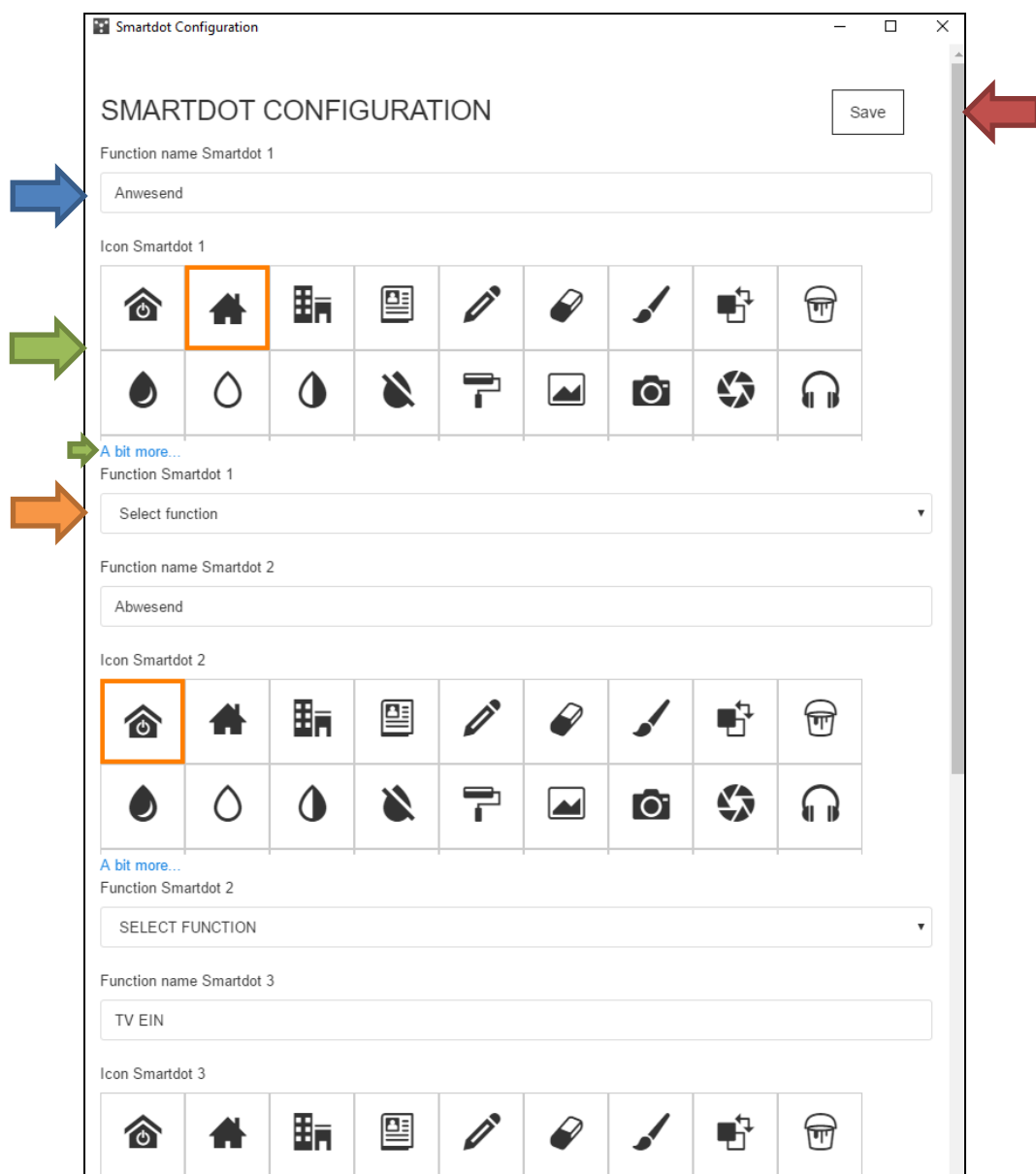Pressing the button is confirmed by a white LED (left below the button).

1.1 FUNCTIONS

The "Smartdot Configuration" software assigns an identifier, function and icon to the four freely configurable SMART DOTS (3-6).

The following figure shows the configuration of the SMART DOTS. The function name Smartdot (blue arrow), Icon (green arrow) and Function (orange arrow) fields can be assigned separately for each button. "A bit more …" (small green arrow) further icons are displayed. More than 456 icons are available for selection. The four different functions are explained in the next subchapters.

The finished configuration must be saved via the "Save" button (red arrow).

Please note that all "SMART DOTS" program windows must first be closed and then restarted in order for the changes to take effect!

The four freely configurable push-buttons can perform the following different function types:

- Send telegrams to the KNX bus (via a KNXnet/IP router tunneling protocol).
- Trigger HTTP requests (GET or POST) via the network or
- Trigger commands via the UDP transmitter.

1.1.1   HTTP REQUEST

An HTTP request can be executed with different methods. You can choose between the methods "GET" and "POST" for this function type.

1.1.1.1 HTTP GET

GET is the most common method for requesting data from a Web server and is often used to transmit data or control commands using URL parameters.
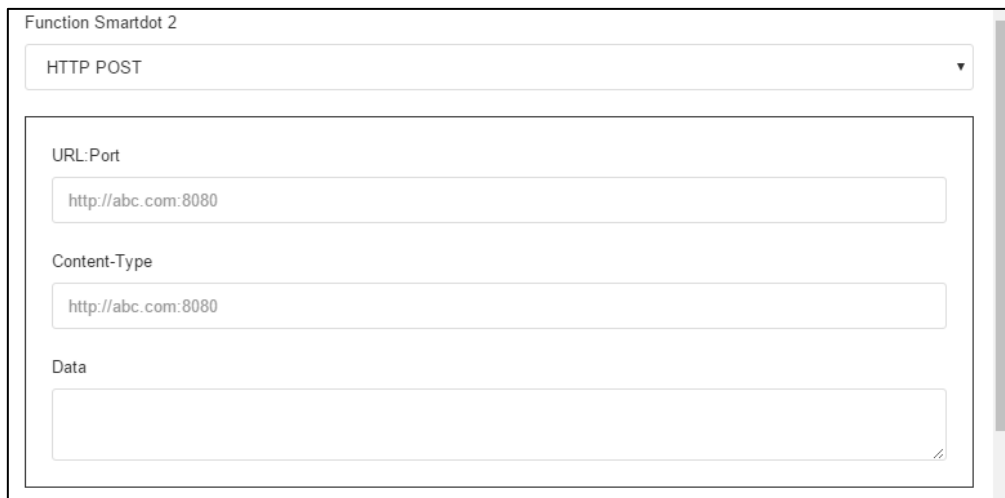
The http-request is entered together with the address and port number in the text field *URL:Port*. For an HTTP GET call, the URL is specified in the following form:

http://<HOST/IP-Address>:<PORT>

Example: http://my.url.com:8080 or http://192.168.20.1:992

(The technically correct term for a URL would actually be URI). However, the actual purpose of GET queries is to retrieve data.
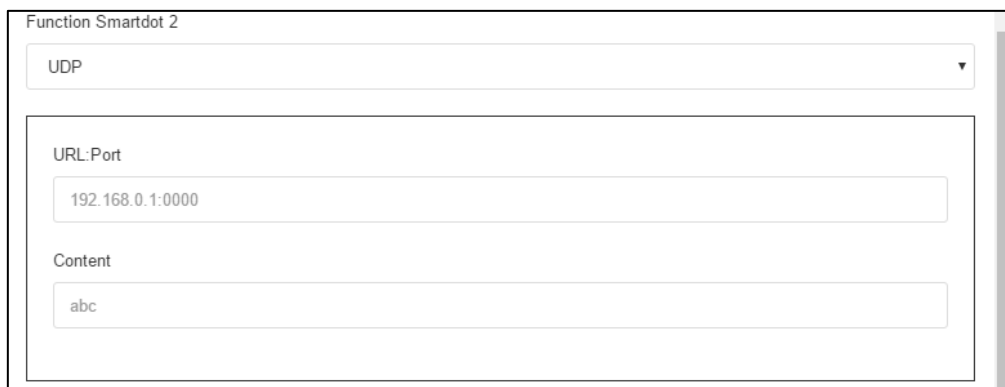
1.1.1.2 HTTP POST

POST is used to transmit content to a server. For example, form data can be transmitted that causes the server to create new data or change existing data.

For an HTTP post call, enter the URL (as for HTTP GET) and also the content type. Possible entries are **application/json** or **text/html** or **XML** .data.

The information to be transmitted is entered in the "Data" field. This information is given within the POST call. This could be in a JSON or XML format, for example.
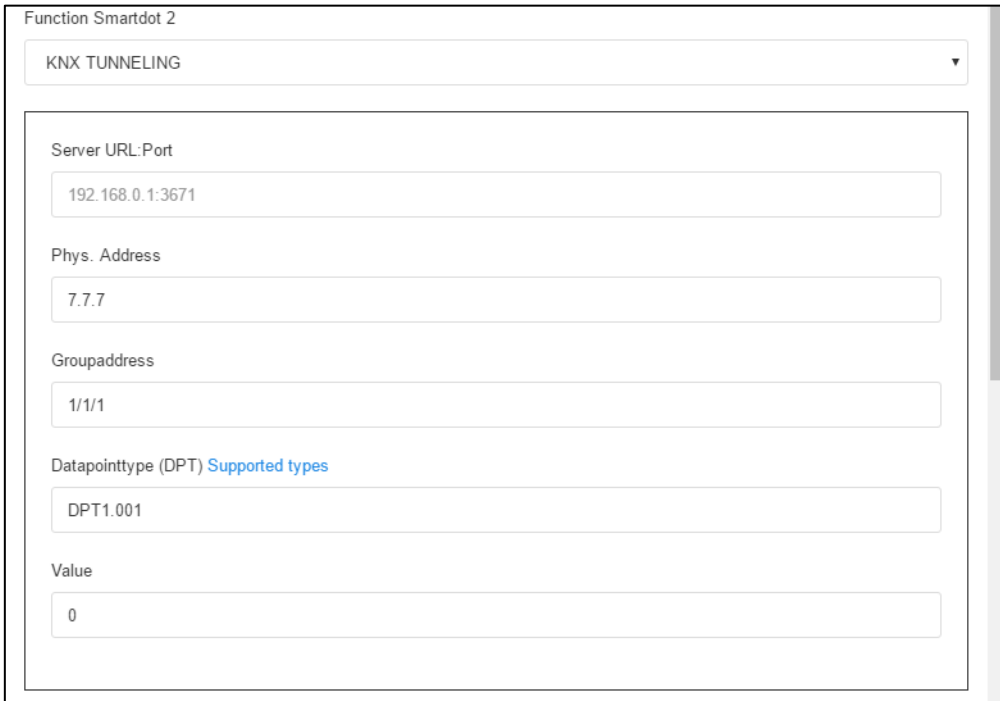
1.1.2   UDP

This function sends a UDP datagram when a SMART DOT is pressed. The destination (address) and the content (send data) are entered in the two fields "*URL:Port*" and "*Content*".
This can be used, for example, to trigger an infrared command via an irTrans with one of the SMART DOT.

1.1.3   KNX TUNNELING

With this function, KNX telegrams can be sent to the network via the KNXnet/IP tunneling protocol. A KNXnet/IP interface or a router that can act as a KNXnet/IP tunneling server (such as the EIB**PORT** or the **LINK**MODULE) serves as the "remote station".

Necessary configurations are:

- **Server** *URL:Port*, is the IP address of the KNXnet/IP Tunneling Server. The port is entered after the IP address or URL separated by a colon. The default port number is 3671.

- **Phys. address**, of the **SMART**SURFACE is entered here. This can be provided with a dummy application in the ETS project. This address appears e.g. in the bus monitor or group monitor.

- **Group address**, the KNX telegram is sent to this group address specified here (target address).

- **Data point type (DPT)**, here you define which data point types the telegram value is. The supported data point types are listed under this link[1].

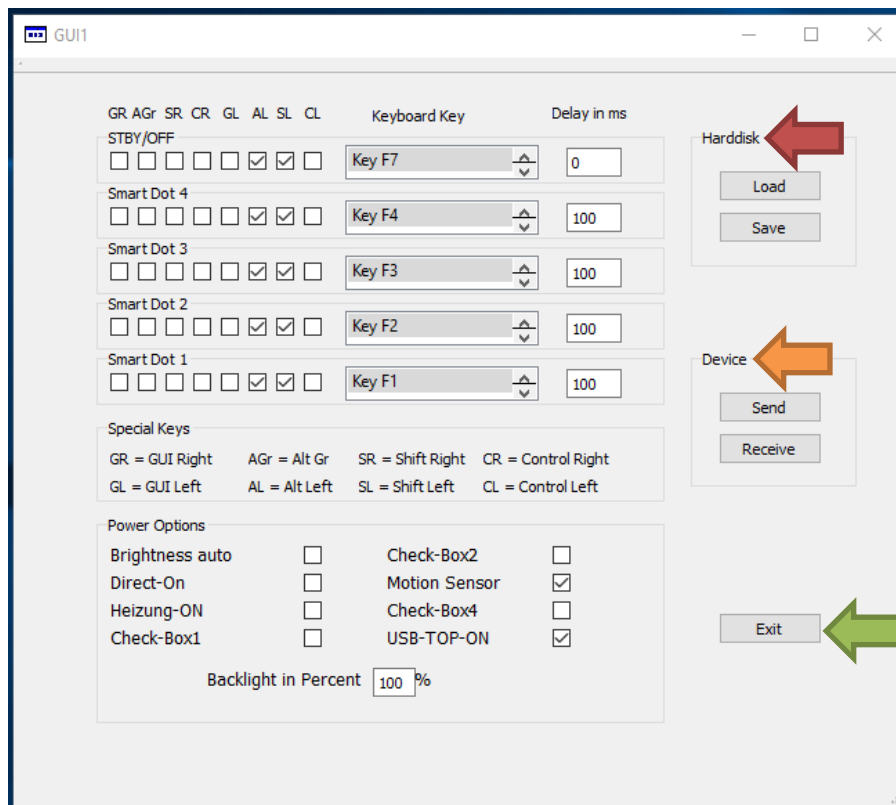- **Value**, is the telegram value for the transmitted KNX telegram.

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[1] https://bitbucket.org/ekarak/knx.js/src/master/README-datapoints.md?fileviewer=file-view-default

2 »SMART DOTS« HARDWARE CONFIGURATION

The configuration of the SMART DOTS hardware (internal assignment of the capacitive button to the command call to the **SMART**SURFACE) is carried out with the "Hardware Configuration" software. It can be found on the desktop under the link "SETUP".

The configuration has already been done by BAB TECHNOLOGIE and does not have to be done again!

Only start the program in **exceptional cases** by double-clicking on the "Hardware Configuration" link. The following figure shows the configuration of the buttons.

The SMART DOTS react to the key combination **Alt** (left) + **Shift** (left) + **F1** to **F4**. This setting is shown in the figure and is preconfigured. Usually you do not need to change this configuration.

If you assign a different keyboard key to the SMART DOTS keys, make sure that the focus is removed from the button (▲ ▼) after a change.
The safest way is to leave the button field with the Tab key after selecting the new keyboard key. This ensures that the new value will be retained when you save the configuration.

The settings can be saved and loaded via the "Hard disk" function (red arrow) with "Load" and "Save" on the hard disk of the **SMART**SURFACE.
Via the function "Device" (orange arrow) "Send" the current setting is loaded into the hardware and with "Receive" from the hardware into.
Thus the current configuration can be read out and checked with "Receive".

The configuration software is closed via "Exit" (green arrow).

The special keys "Special Keys" are explained directly in the program window. The following keys are available

- GR   GUI Right
- GL   GUI Left
- AGr   right ALT GR Key
- AL   left ALT Key
- SR   right SHIFT Key
- SL   left SHIFT Key
- CR   right CTRL Key
- CL   left CTRL Key

Note: The special key "GL" is required for key combinations with the Windows key. So you can put "GL" + "Key D" on a Smart Dot to show the Windows desktop when clicking.

Information: Factory setting of the key combinations for the four SMART DOTS is:

- SMART DOT 1   AL+SL+F1   **Alt** (left) + **Shift** (left) + **F1**
- SMART DOT 2   AL+SL+F2   **Alt** (left) + **Shift** (left) + **F2**
- SMART DOT 3   AL+SL+F3   **Alt** (left) + **Shift** (left) + **F3**
- SMART DOT 4   AL+SL+F4   **Alt** (left) + **Shift** (left) + **F4**

- Motion Sensor   AL+SL+F7   **Alt** (left) + **Shift** (left) + **F7**