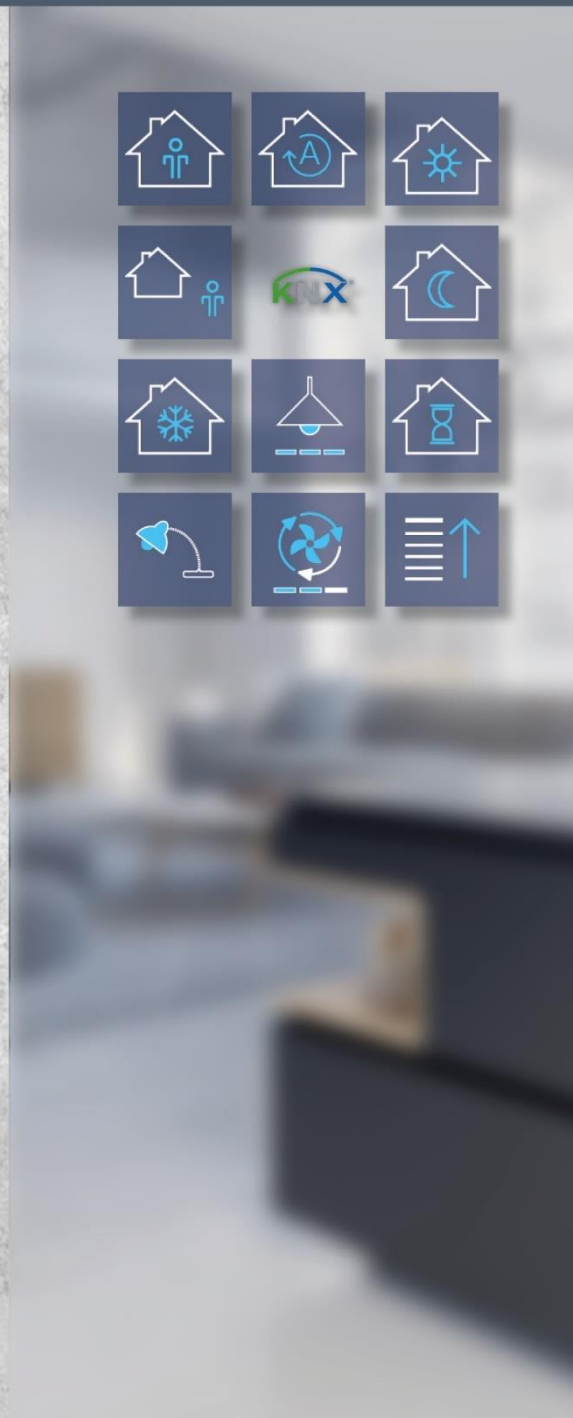


Touch_IT series | Manual

Application description



arcus-eds



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2. General

The Touch_IT products were developed for visualization and control applications in KNX systems, they support a wide range of functions:

Switching and dimming, status display, RGB control, On/Off switching of several devices, alarm functions, display and setting of heating control parameters, multiroom functions, astronomical weekly timer, clock timer, data logging ...

Each page and element can be protected by global or dedicated PIN and there is also the possibility for a custom layout.

The Associated ETS-Application is TouchIT_V2.knxprod

2.1. Available Displays

There is further information available in the datasheets on our website, including the different design options for the cases. The aluminum cases are also available in other surface finishes and colors, contact our service team for further information.

2.1.1. Touch_IT-C3

3,5" TFT touchscreen with 320x240 pixels 256K colors (RGB)
32-bit ARM processor, 200MHz, 2GByte Flash Memory, 512MB RAM,
LINUX operating system
mini-USB port and a microSD slot for data storage
Aluminum case in 2 designs and up to 4 colors
Dimension (mm) 80 x 80 x 10
In wall switch box diameter 68mm



2.1.2. Touch_IT-SMART

IR-Temperature Sensor
3,5" TFT touchscreen with 320x240 pixels 256K colors (RGB)
200MHz 32-bit ARM processor, 2GByte Flash Memory, 512MB RAM
LINUX operating system
mini-USB port and a microSD slot for data storage
Aluminum case in 4 different colors
Dimension (mm) 80 x 80 x 12
In wall switch box diameter 68mm



2.1.3. Touch_IT-AC35

IR-Temperature Sensor
3,5" TFT touchscreen with 320x240 pixels 256K colors (RGB)
32-bit ARM processor, 1GHz, 8 GByte Flash Memory, 512 MB RAM
LINUX operating system
micro-USB port and a microSD slot for data storage
Aluminum case
Dimension (mm) 80 x 80 x 12
In wall switch box diameter 68mm



2.1.4. Touch_IT-PC35

IR-Temperature Sensor
3,5" TFT touchscreen with 320x240 pixels 256K colors (RGB)
32-bit ARM processor, 1GHz, 8 GByte Flash Memory, 512 MB RAM
LINUX operating system
micro-USB port and a microSD slot for data storage
Plastic case
Dimension (mm) 96 x 96 x 15
In wall switch box diameter 68mm



2.1.5. Touch_IT-AC4

IR-Temperature Sensor
IPS touchscreen with 800 x 480 pixels, 16M colors
8 Core ARM-Processor, 1.2 GHz, 8 GByte Flash Memory, 1GB RAM
LINUX operating system
micro-USB port and a microSD slot for data storage
Aluminum case
Dimension (mm) 80.5 x 128 x 10.5
In wall switch box diameter 68mm



2.1.6. Touch_IT-AC4-IP65

IR-Temperature Sensor
IPS touchscreen with 800 x 480 pixels, 16M colors
8 Core ARM-Processor, 1.2 GHz, 8 GByte Flash Memory, 1GB RAM
LINUX operating system
micro-USB port and a microSD slot for data storage
Aluminum case
Dimension (mm) 80.5 x 130 x 28.5
on wall mounting



2.2. Behavior at Bus Voltage Recovery

All settings and the ETS programming will be preserved.

2.3. Download Button

2.3.1. Others

The download button is located on the back side of the device. On some models it is hidden under the label on the back side. There is also a software button in the system settings under [System & SD-card](#).

2.3.2. AC4

There is only a software button in the system settings under [System & SD-card](#).

2.4. Factory reset

2.4.1. Others

Disconnect USB and AUX. Hold the download button while connecting USB or AUX and wait until the touchscreen calibration appears on screen. Normally, this takes 40-60 seconds. After pressing the 5 calibration points the device is reset.

2.4.2. AC4

Disconnect USB and AUX and reconnect one of them. Press the touch screen anywhere when the penguins appear and hold until the reset menu is displayed. Confirm by pressing reset.

3. ETS Application Description

3.1. General

General									
Master PIN	0								
Use PIN for settings dialog	☒ No ☐ Yes								
Layout	2X4-Layout								
Icon theme	☒ Bright ☐ Dark (for bright surfaces)								
	<table border="1"> <tr><td>1</td><td>2</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td></tr> </table>	1	2	3	4	5	6	7	8
1	2								
3	4								
5	6								
7	8								
Display menu page	☒ No ☐ Yes								
Display user language chooser	☒ No ☐ Yes								
Page scheme	☒ 5 Pages / 1 Alarm Page ☐ 6 Pages								
Global format identifiers									
Additional identifiers									
Page 1 Name [;Format]									
Use PIN for Page2	☒ No ☐ Yes								
Page 2 Name [;Format]									
Use PIN for Page3	☒ No ☐ Yes								
Page 3 Name [;Format]									
Use PIN for Page4	☒ No ☐ Yes								
Page 4 Name [;Format]									
Use PIN for Page5	☒ No ☐ Yes								
Page 5 Name [;Format]									
Use PIN for Page6	☒ No ☐ Yes								
Page 6 Name [;Format]									
Use RTC	☒ No ☐ Yes								
Use logic functions	☒ No ☐ Yes								

3.1.1. Master PIN

Defines the default Pin that can be used to protect pages, elements or settings. It has to be enabled separately in the Parameters.

Examples:

Value 0: Disables the PIN even if enabled for specific object, unless there is a local PIN defined in the Format field.

Value 1: The pin is 0001

Value 1234: The pin is 1234

3.1.2. Use Pin for settings dialog

If set to YES, the Master PIN is used to secure the system settings page. This only works if the master pin is not 0.

e2 / subject to change

3.1.3. Layout

Defines how the 8 Elements are position on the Pages. If not all 8 elements are used, then it depends on the settings [Expand horizontal](#) and [Expand vertical](#) how the page is filled.

2x4-Layout

Default

1	2
3	4
5	6
7	8

AC4 in vertical orientation

Page Title 05.02.20 09:23:00
1
2
3
4
5
6
7
8

2+6-Layout

Default

1	3
	4
	5
	6
2	7
	8

AC4 in vertical orientation

Page Title 05.02.20 09:23:00
1 2
3
4
5
6
7
8

Custom Layout

This Layout option give the user more freedom in setting up the pages and configuring other options. For more information see [Fehler! Verweisquelle konnte nicht gefunden werden..](#)

Pro	Con
Elements can be positioned freely	Requires a USB connection for commissioning and updates
Icon selection with preview	Requires additional Software (Touch_IT-Creator)
User defined icons	
User defined screensaver	
Design background images	

Object Identifiers

Copy the "Project string" from the Touch_IT-Creator and paste it in the "Object Identifiers" field.

When the Custom Layout is used, part of the Application is programmed via USB by the Touch_IT-Creator. But the Group Objects and connected Group addresses have to be programmed with the ETS.

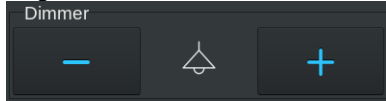
The correct group objects are only available if the up-to-date "Project string" is inserted.

General	Master PIN	0
+ Page 1	Use PIN for settings dialog	☒ No ☐ Yes
+ Page 2	Layout	Custom Layout
+ Page 3	Icon theme	☒ Bright ☐ Dark (for bright surfaces)
	Object Identifiers	0000000000000000;0000000000000000;000000000000

3.1.4. Icon theme

Selection of the available standard icon color theme. This also sets the invers background color.

Bright



Bright icons, dark background

Dark



Dark icons, bright background

3.1.5. Display menu page

No

There is no menu page, the device displays page 1 at startup. There are arrows in the top corners to get from one page to the next. It is also possible to setup the JUMP format parameter for elements, to switch between pages.

Yes

The device shows a menu page on startup. There are different styles available, selectable by setting parameter MTYPE to the corresponding value in the [Global format identifiers](#) or [Additional identifiers](#) field.

The text and Icon displayed in the menu can be selected by setting Page X name and ICO in the [Page X Name \[;Format \]](#) Field. If no ICO or Name is defined the Button is displayed blank.

Global format identifiers

Additional identifiers

Page 1 Name [;Format]

MTYPE=0



MTYPE=1



MTYPE=2

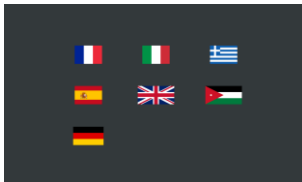


MTYPE=3



3.1.6. Display user language chooser

Enables a flag button in the top left corner on the display. This button opens a selection menu with options for different languages. It is also possible upload custom translation files, to also translate text defined in the ETS parameters. For further information see [Translation / Localization](#).



3.1.7. Page scheme

5 Pages / 1 Alarm Page

5 normal Pages and 1 Alarm Page.

Further information about the alarm page, see [Alarm Page](#).

6 Pages

6 normal Pages.

3.1.8. Global format identifiers

If this field is full, use the [Additional identifiers](#) field. It can be used in the same manner.

This field is used for global parameter settings.

The text before the first ; (semicolon) is displayed as title on the menu page. If no title is used, then the first symbol in the field has to be a semicolon.

Possible Parameter		
STDLONG	=500	Timeout for long button press in ms (Default 500 ms)
STDREP	=300	Repetition rate for long button press in ms (Default 300 ms)
INVSCR		Invert object number 4 IO (System Object Nr 1-5)
INVONOFF		Invert object number 3 IO (System Object Nr 1-5)

Example for menu title

Global format identifiers: Hauptmenü;MTYPE=1



3.1.9. Additional identifiers

This field can be used in the same way as the [Global format identifiers](#) field.

3.1.10. Page X Name [;Format]

The text before the first ; (semicolon) is displayed on the menu page button and as title on the page itself. If no title is used, then the first symbol in the field has to be a semicolon.

Possible parameter		
ICO	=TERRACE	Icon for the menu page (see Icons). Icon name without file extension.
LOGIC	=fooName (arg)	Logic triggered when pressing menu page button. Disables the automatic page jump, so the logic function has to call <code>sys.set_page(pageNr_int)</code> .
PIN	=2340	Define 4-digit pin for this page. Overwrites Master PIN if enabled.

Custom layout parameter		
T	=x,y,color	Time on page. Example: T=180,65,8,#ffffff
D	=x,y,color	Date on page. Example: D=120,220,8,#ffffff
S	=x,y,w,h(icon)	System settings link. Example: S=280,220,8,0,#ffffff
C	=x,y,digits,color	Internal temperature. Example: C=280,220,8,0,#ffffff
C1	=x,y,obj,digits,postfix,color	Group object value.

Examples		
Schalter;ICO=ONOFF_b_off		Page name: Schalter, Menu Icon: ONOFF_b_off
;ICO=POOL,PIN=1234		No page name, Menu Icon: POOL, Pin to access page:1234

3.1.11. Page 6 Name [;Format] (Alarm)

If "5 Pages / 1 Alarm Page" is selected for ETS parameter [Page scheme](#) the following parameter are available for the alarm page 6.

Additional parameter		
BEEPOFF	=3	Number of beeps before the acoustic alarm signals is switched off (undefined = infinite beeps).
RESCAN	=5	Rescan alarm group objects after x seconds.
SILENT		Silent alarm.
AUTOHIDE		End alarm if the condition is not met anymore.

3.1.12. Use PIN for PageX

If set to YES, the Master PIN is used to secure the page. This only works if Master Pin is not 0 or a PIN is defined in Page X Name [;Format].

3.1.13. Use RTC

Enables the room temperature controller. For further information see [Other docu](#).

3.1.14. Use logic functions

Enable the LUA logic block and logic group objects. For further information see [Logic](#).

Logic scheme

The "Internal Only" option can be used, if no additional group objects are need for the logic.

Scheme	Available group objects			
	1 Bit	1 Byte	2-Byte	4-Byte
Internal Only	0	0	0	0
IO-Scheme 1	10	8	8	5
IO-Scheme 2	23	4	2	2
IO-Scheme 3	15	12	2	2

3.2. Page X, Element X

Each of the 6 Pages can be populated with up to 8 Elements. Each of these Elements has a separate page for its configuration in the ETS.

1.8.2 TouchIT-Custom_A4-1 > Page 1 > Element 1:

General

Page 1

Element 1:

Element 2:

Element 3:

Element 4:

Element 5:

Element 6:

Element 7:

Element 8:

Page 2

Page 3

Descriptor

Object Type: 1 Bit

Element Type: None

Element Size: Normal

Interactive: ☐ No ☒ Yes

Use Element PIN: ☒ No ☐ Yes

Align steps: ☐ No ☒ Yes

Expand horizontal: ☐ No ☒ Yes

Expand vertical: ☐ No ☒ Yes

Name [;Format]

1

2

3

4

5

6

7

8

3.2.1. Descriptor

ETS internal parameter, used to label the group objects and list entry in the parameter's menu.

3.2.2. Object Type

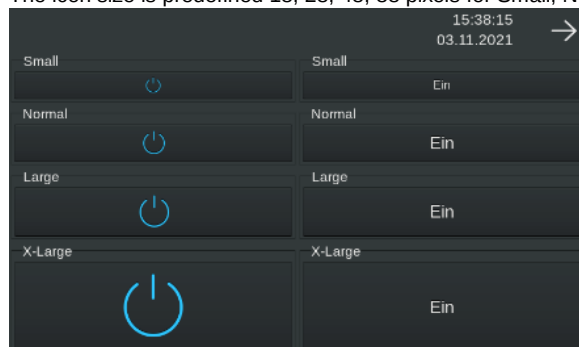
General selection of datatype or function for the element.

3.2.3. Element Type

Selecting the explicit type for the element. For all available "Element Types" with examples and description see [Element Type](#).

3.2.4. Element Size

Determines which icon and font size is used for the element. The font size can be adjusted in the system settings on the device. The icon size is predefined 18, 28, 48, 88 pixels for Small, Normal, Large, X-Large.



3.2.5. Interactive

If set to No, the Element is only used to display a value. This means that on the display there is no interaction with the element possible.

3.2.6. Use Element PIN

If set to YES, the Master PIN is used to secure the element. This only works if Master Pin is not 0 or a local PIN is defined in [Page X Name \[;Format \]](#).

3.2.7. Align steps

Round value up or down to align with the defined step size.

Example

Step size is 50 and current value is 130.

With align steps next values are 100 or 150.

Without align steps next values are 80 or 180.

3.2.8. Expand horizontal

Expand the element horizontally as far as possible to the adjacent grid areas.

3.2.9. Expand vertical

Expand the element vertically as far as possible to the adjacent grid areas.

3.2.10. Name [;Format]

This field is optional. It allows the naming and further adjustments of the selected "Element Type".

The name is defined before the first semicolon (;) if it is omitted, a semicolon has to be inserted before the first format parameter.

The name is displayed above the element. This name is also displayed in submenus of some element types, e.g. Timer, Datalogging,

A detailed description with examples for all the available Element types can be found in section [Element Type](#).

3.3. Group Objects

3.3.1. System Object Nr 1-5

Number * Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
1 I Time	System Time input			3 bytes	C	R	W	T	U	time of day	Low
2 I Date	System Date input			3 bytes	C	R	W	T	U	date	Low
3 IO On/Off	System On/off			1 bit	C	R	W	T	U	switch	Low
4 IO Standby	System Standby			1 bit	C	R	W	T	U	switch	Low
5 I LED	System LED			1 byte	C	R	W	T	U	percentage (0..100%)	Low

Obj Nr	Name	Description
1	I Time	Set or update the device system time
2	I Date	Set or update the device system date
3	IO On/Off	Out: 0: Device off 1: Device on (also if screensaver is displayed) In: 0: Device off 1: Device on, display page 1 or menu
4	IO Standby	Out: 0: Device off 1: Device on, displays screensaver In: 0: No action 1: Device on, display screensaver
5	I LED	Allows the control of the notification LED available in some hardware configurations

Object nr 3 can be inverted with the INVONOFF parameter and object nr 4 can be inverted with the INVSCR parameter in the [Global format identifiers](#) field.

3.3.2. RTC Object Nr 6-31

The available objects depend on the selected room temperature controller. For further information see [Other](#) docu.

3.3.3. Logic Object Nr 32-62

The available Objects depend on the selected scheme. For further information see [Logic](#).

3.3.4. Element Types Object Nr 63-254

Each element type selected in the ETS parameters enables up to 4 associated group objects. Each group object starts with two point separated numbers, indicating page followed by element nr. After the group object name the [Descriptor](#) is added separated by _ (underscore).

E.g. "6.8-D IO, Switching 4_test" indicates page 6 element nr 8 and descriptor test.

For further information about all available element types go to [Element Type](#).

4. Element Type

4.1. 1 Bit

Image	Nr.	Element Type
	Data type	Format
1-bit-ON/OFF-Toggle-Text Ein	1 2x 1 Bit	1-bit-ON/OFF-Toggle-Text B0, B1, ICO, TC, BCOL, NOBG, BSWAP, RDRQ, PIN, LOGIC, AL, AH
1-bit-ON/OFF-Toggle-Picture 	2 2x 1 Bit	1-bit-ON/OFF-Toggle-Picture IMGSET, ICO, NOBG, BSWAP, RDRQ, PIN, LOGIC, AL, AH
1-bit-ON/OFF-Toggle-Text with Value Aus Ein	3 2x 1 Bit	1-bit-ON/OFF-Toggle-Text with Value W, B0, B1, L0, L1, ICO, TC, LCOL, BCOL, NOBG, BSWAP, LSWAP, RDRQ, PIN, LOGIC, AL, AH
1-bit-ON/OFF-Toggle-Picture with Value  	4 2x 1 Bit	1-bit-ON/OFF-Toggle-Picture with Value W, IMGSET, ICO, NOBG, BSWAP, LSWAP, RDRQ, PIN, LOGIC, AL, AH
1-bit-ON/OFF-Text with Value Aus Aus Ein	5 2x 1 Bit	1-bit-ON/OFF-Text with Value W, B0, B1, L0, L1, ICO, TC, LCOL, BCOL, NOBG, BSWAP, LSWAP, RDRQ, PIN, LOGIC, AL, AH
1-bit-ON/OFF-Picture with Value   	6 2x 1 Bit	1-bit-ON/OFF-Picture with Value W, IMGSET, ICO, NOBG, BSWAP, LSWAP, RDRQ, PIN, LOGIC, AL, AH
1-Bit-Value-Pushbutton 	40 2x 1 Bit	1-Bit-Value-Pushbutton LABEL, PRESS, RELEASE, IMG, ICO, TC, JUMP, NOBG, PIN, LOGIC, LOGICR
1-bit-Quad-ON/OFF-Status/Toggle-Text Off Off Off Off	85 4x 1 Bit	1-bit-Quad-ON/OFF-Status/Toggle-Text W, LABELS, ICO, TC, N, NOBG, RDRQ, PIN, ALARM
1-bit-Quad-ON/OFF-Status/Toggle-Picture    	86 4x 1 Bit	1-bit-Quad-ON/OFF-Status/Toggle-Picture W, IMGSETS, ICO, N, NOBG, RDRQ, PIN, ALARM
1-bit-Quad-Value-Pushbutton-Text On On On On	87 4x 1 Bit	1-bit-Quad-Value-Pushbutton-Text W, LABELS, PRESS, ICO, N, J1, J2, J3, J4, NOBG, PIN
1-bit-Quad-Value-Pushbutton-Picture    	88 4x 1 Bit	1-bit-Quad-Value-Pushbutton-Picture W, PRESS, IMGSETS, ICO, N, J1, J2, J3, J4, NOBG, PIN

4.1.1. 1-bit-ON/OFF-Toggle-Text

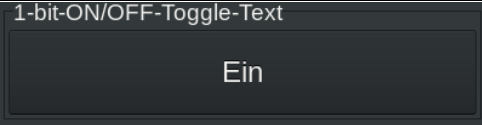
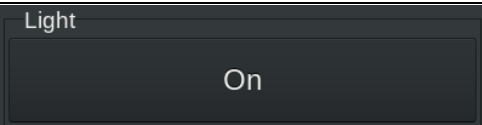
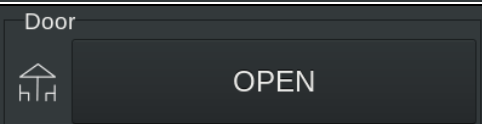
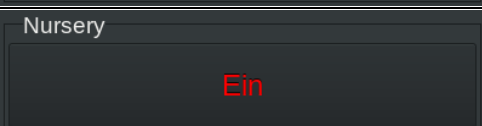
Element Type Nr. 1

ETS Group Objects		
A IO, Switching	1 bit	Main group object.
B Input, Feedback	1 bit	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
B0 =Off		Text on the button for value 0.
B1 =On		Text on the button for value 1.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL =green		Button text color. HTML color name (red) or HEX color codes (#FF0000).
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
BSWAP		Swap the contents on the button, so if pressed, it outputs the opposite of what it shows on the button.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName(arg)		Call a LUA logic function on button press.
AL =0		Alarm lower limit. Only works on alarm Page.
AH =1		Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-bit values.

Example

1-bit-ON/OFF-Toggle-Text	1-bit-ON/OFF-Toggle-Text
	
Light	Light;B0=Off;B1=On
	
Door	Door;ICO=TERRACE;B0=CLOSE;B1=OPEN
	
Nursery	Nursery;TC=red
	

e2 / subject to change

4.1.2. 1-bit-ON/OFF-Toggle-Picture

Element Type Nr. 2

ETS Group Objects		
A IO, Switching	1 bit	Main group object.
B Input, Feedback	1 bit	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
IMGSET =ONOFF		Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
BSWAP		Swap the contents on the button, so if pressed, it outputs the opposite of what it shows on the button.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName (arg)		Call a LUA logic function on button press.
AL =0		Alarm lower limit. Only works on alarm Page.
AH =1		Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-bit values.

Example

1-bit-ON/OFF-Toggle-Picture	1-bit-ON/OFF-Toggle-Picture
Socket	; IMGSET=ONOFF
Socket	
Kitchen	Kitchen; ICO=KITCHEN; IMGSET=LIGHT
Kitchen	

e2 / subject to change

4.1.3. 1-bit-ON/OFF-Toggle-Text with Value

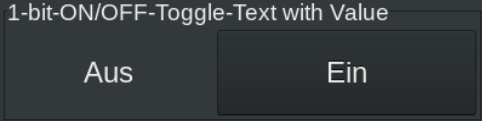
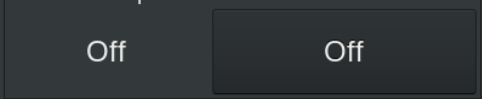
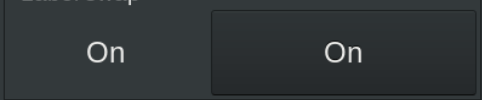
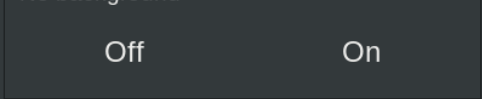
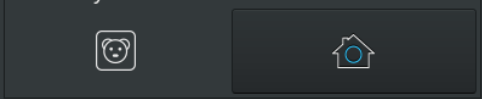
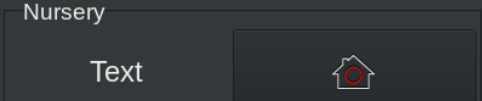
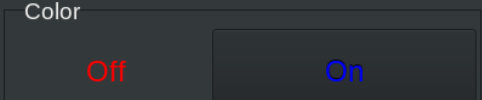
Element Type Nr. 3

ETS Group Objects		
A IO, Switching	1 bit	Main group object.
B Input, Feedback	1 bit	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
B0 =Off		Text or icon on the button for value 0. Icon filename without file extension.
B1 =On		Text or icon on the button for value 1. Icon filename without file extension.
L0 =Off		Text or icon on the label for value 0. Icon filename without file extension.
L1 =On		Text or icon on the label for value 1. Icon filename without file extension.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL =#FF0000		Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL =green		Button text color. HTML color name (red) or HEX color codes (#FF0000).
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
BSWAP		Swap the contents on the button, so if pressed, it outputs the opposite of what it shows on the button.
LSWAP		Swap the contents on the label, so it shows the opposite of the input value.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName(arg)		Call a LUA logic function on button press.
AL =0		Alarm lower limit. Only works on alarm Page.
AH =1		Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-bit values.

Example

1-bit-ON/OFF-Toggle-Text with Value	1-bit-ON/OFF-Toggle-Text with Value
	
Button swap	Button swap;B0=Off;B1=On;L0=Off;L1=On;BSWAP
	
Label swap	Label swap;B0=Off;B1=On;L0=Off;L1=On;LSWAP
	
No background	No background;B0=Off;B1=On;L0=Off;L1=On;NOBG
	
Nursery	Nursery;B0=HEATING;B1=COOLING;L0=CHILD_1;L1=Text
	
Nursery	
	
Color	Color;TC=red;BCOL=blue
	

e2 / subject to change

4.1.4. 1-bit-ON/OFF-Toggle-Picture with Value

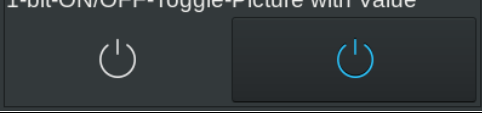
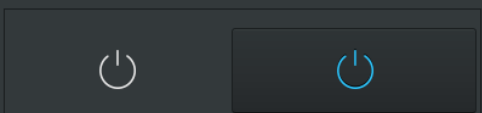
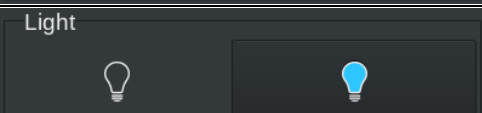
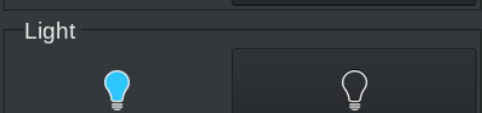
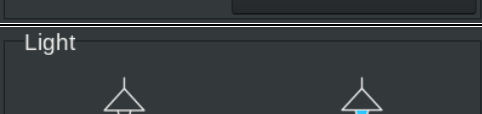
Element Type Nr. 4

ETS Group Objects		
A IO, Switching	1 bit	Main group object.
B Input, Feedback	1 bit	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
BSWAP		Swap the contents on the button, so if pressed, it outputs the opposite of what it shows on the button.
LSWAP		Swap the contents on the label, so it shows the opposite of the input value.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC	=fooName(arg)	Call a LUA logic function on button press.
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-bit values.

Example

1-bit-ON/OFF-Toggle-Picture with Value	1-bit-ON/OFF-Toggle-Picture with Value
	
	; IMGSET=ONOFF
Light	Light; IMGSET=LIGHT1
	
Light	
	
Light	Light; IMGSET=LIGHT;NOBG
	

e2 / subject to change

4.1.5. 1-bit-ON/OFF-Text with Value

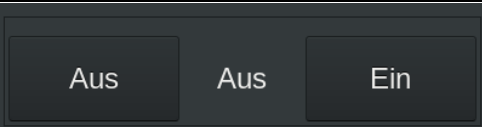
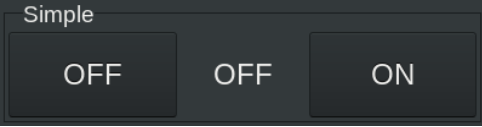
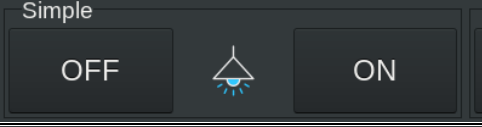
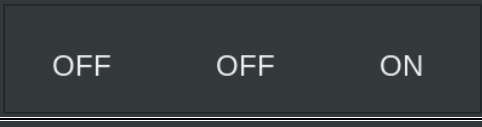
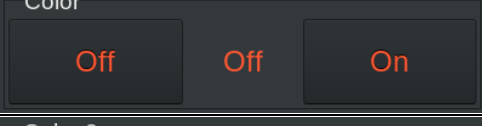
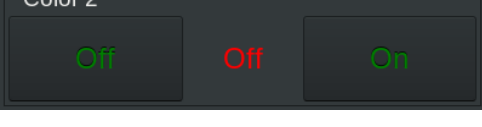
Element Type Nr. 5

ETS Group Objects		
A IO, Switching	1 bit	Main group object.
B Input, Feedback	1 bit	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
B0 =Off		Text or icon on the button for value 0. Icon filename without file extension.
B1 =On		Text or icon on the button for value 1. Icon filename without file extension.
L0 =Off		Text or icon on the label for value 0. Icon filename without file extension.
L1 =On		Text or icon on the label for value 1. Icon filename without file extension.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL =#FF0000		Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL =green		Button text color. HTML color name (red) or HEX color codes (#FF0000).
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
BSWAP		Swap the contents on the button, so if pressed, it outputs the opposite of what it shows on the button.
LSWAP		Swap the contents on the label, so it shows the opposite of the input value.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName (arg)		Call a LUA logic function on button press.
AL =0		Alarm lower limit. Only works on alarm Page.
AH =1		Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-bit values.

Example

	1-bit-ON/OFF-Text with Value
	Simple;B0=OFF;B1=ON;L0=OFF;L1=ON
	Simple;B0=OFF;B1=ON;L0=LIGHT_b_off;L1=LIGHT_b_on
	;B0=OFF ;B1=ON ;L0=OFF ;L1=ON ;NOBG
	Color;TC=#FF5733;
	Color 2;BCOL=green;LCOL=#FF0000

e2 / subject to change

4.1.6. 1-bit-ON/OFF-Picture with Value

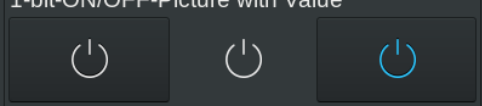
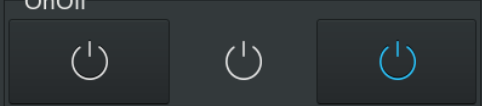
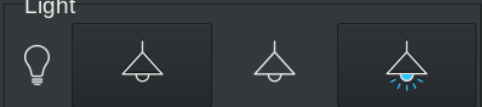
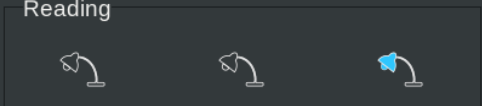
Element Type Nr. 6

ETS Group Objects		
A IO, Switching	1 bit	Main group object.
B Input, Feedback	1 bit	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
BSWAP		Swap the contents on the button, so if pressed, it outputs the opposite of what it shows on the button.
LSWAP		Swap the contents on the label, so it shows the opposite of the input value.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC	=fooName(arg)	Call a LUA logic function on button press.
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-bit values.

Example

1-bit-ON/OFF-Picture with Value 	1-bit-ON/OFF-Picture with Value
OnOff 	OnOff; IMGSET=ONOFF
Light 	Light; ICO=LIGHT1_b_off; IMGSET=LIGHT
Reading 	Reading; IMGSET=LIGHT3; NOBG

e2 / subject to change

4.1.7. 1-Bit-Value-Pushbutton

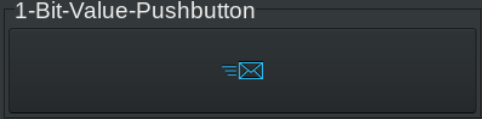
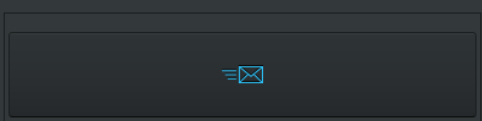
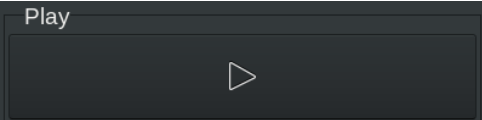
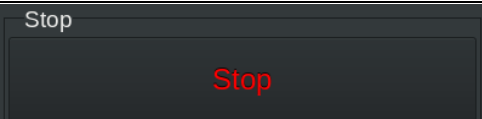
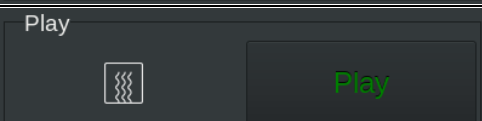
Element Type Nr. 40

ETS Group Objects		
A Output, Value	1 bit	Main group object. Sends values on PRESS and/or RELEASE.
B Output, Value B	1 bit	If this group object is connected, object A sends values on PRESS and object B sends on RELEASE.
N/A		
N/A		
Format		
LABEL	=Test	Text on the button.
PRESS	=1	Value sent on button press.
RELEASE	=0	Value sent on button release.
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
JUMP	=2	Jump to page number x on button press.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC	=fooName(arg)	Call a LUA logic function on button press.
LOGICR	=fooName(arg)	Call a LUA logic function on button release.

Info

Element to send 1-bit values on button press and/or release.

Example

1-Bit-Value-Pushbutton	1-Bit-Value-Pushbutton
	
	; PRESS=1; IMG=SEND
Play	Play; RELEASE=0; IMG=PLAY
	
Stop	Stop; RELEASE=1; LABEL=Stop; TC=red
	
Play	Play; RELEASE=0; LABEL=Play; ICO=SAUNA; TC=green
	

e2 / subject to change

4.1.8. 1-bit-Quad-ON/OFF-Status/Toggle-Text

Element Type Nr. 85

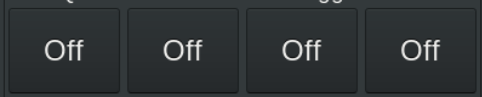
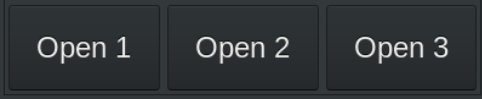
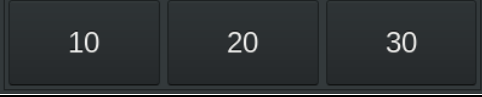
ETS Group Objects		
A IO, Switching 1	1 bit	Group object for the associated channel.
B IO, Switching 2	1 bit	Group object for the associated channel.
C IO, Switching 3	1 bit	Group object for the associated channel.
D IO, Switching 4	1 bit	Group object for the associated channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
LABELS	=ON, OFF, ON, OFF	Text for each button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
N	=2	Number of buttons displayed.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
ALARM		Acoustic alarm if the value is 1.

Info

Element to send and receive 4 x 1-bit values.

LABELS = Label button 1 for value 1, Label button 1 for value 0, Label button 2 for value 1, Label button 2 for value 0, ...

Example

1-bit-Quad-ON/OFF-Status/Toggle-Text 	1-bit-Quad-ON/OFF-Status/Toggle-Text
Doors 	Doors; LABELS=Open 1, Close 1, Open 2, Close 2, Open 3, Close 3; N=3
Numbers 	Numbers; LABELS=10, 11, 20, 21, 30, 31; N=3
Alarm 	Alarm; LABELS=ON 1, OFF 1, ON 2, OFF 2; N=2; ALARM; ICO=WARNING; TC=red

e2 / subject to change

4.1.9. 1-bit-Quad-ON/OFF-Status/Toggle-Picture

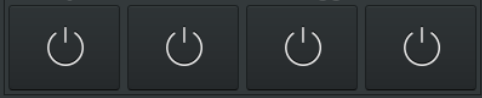
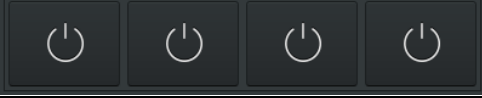
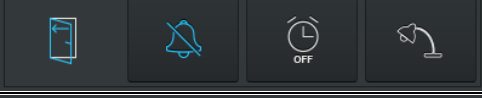
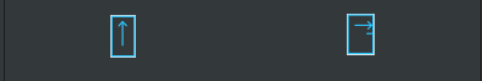
Element Type Nr. 86

ETS Group Objects		
A IO, Switching 1	1 bit	Group object for the associated channel.
B IO, Switching 2	1 bit	Group object for the associated channel.
C IO, Switching 3	1 bit	Group object for the associated channel.
D IO, Switching 4	1 bit	Group object for the associated channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSETS	=BELL, AL, LIGHT	Icon set used for the button/s. The argument is the icon sets name without file extension and without suffix, separated by comma.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
N	=2	Number of buttons displayed.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
ALARM		Acoustic alarm if the value is 1.

Info

Element to send and receive 4 x 1-bit values.

Example

1-bit-Quad-ON/OFF-Status/Toggle-Picture 	1-bit-Quad-ON/OFF-Status/Toggle-Picture
Sockets 	Sockets; IMGSETS=ONOFF
Only 3 	Only 3; IMGSETS=BELL, AL, LIGHT3; N=3; ICO=DOOR
	; IMGSETS=WINDO, DOOR; N=2; ALARM; NOBG

e2 / subject to change

4.1.10. 1-bit-Quad-Value-Pushbutton-Text

Element Type Nr. 87

ETS Group Objects		
A Output, Switching 1	1 bit	Group object for the associated channel.
B Output, Switching 2	1 bit	Group object for the associated channel.
C Output, Switching 3	1 bit	Group object for the associated channel.
D Output, Switching 4	1 bit	Group object for the associated channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
LABELS	=ON, OFF, ON, OFF	Text for each button.
PRESS	=1, 0, 1, 0	Value for each button sent on press.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
N	=2	Number of buttons displayed.
J1	=3	Button 1 jump to page x. x is 0..5 for page 1..6.
J2	=2	Button 2 jump to page x. x is 0..5 for page 1..6.
J3	=1	Button 3 jump to page x. x is 0..5 for page 1..6.
J4	=0	Button 4 jump to page x. x is 0..5 for page 1..6.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element to send 4 x 1-bit values.

LABELS = Label push button 1, Label push button 2, ...

PRESS = Value sent push button 1, Value sent push button 2,...

Example

1-bit-Quad-Value-Pushbutton-Text 	1-bit-Quad-Value-Pushbutton-Text
Example 	Example; LABELS=ON, OFF, ON, OFF; PRESS=1, 0, 1, 0
Only 3 	Only 3; LABELS=1, 2, 3; N=3; ICO=SCENE2; J1=0; J2=1; J3=2
No Button 	No Button; LABELS=OFF1, OFF2; PRESS=0, 0; N=2; NOBG

e2 / subject to change

4.1.11. 1-bit-Quad-Value-Pushbutton-Picture

Element Type Nr. 88

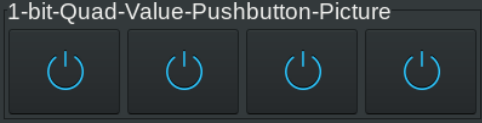
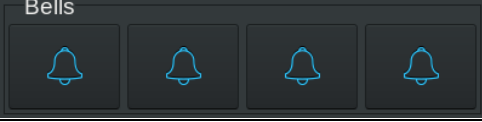
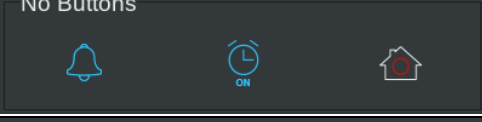
ETS Group Objects		
A Output, Switching 1	1 bit	Group object for the associated channel.
B Output, Switching 2	1 bit	Group object for the associated channel.
C Output, Switching 3	1 bit	Group object for the associated channel.
D Output, Switching 4	1 bit	Group object for the associated channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
PRESS	=1, 0, 1, 0	Value for each button sent on press.
IMGSETS	=BELL, AL, LIGHT	Icon set used for the button/s. The argument is the icon sets name without file extension and without suffix, separated by comma.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
N	=2	Number of buttons displayed.
J1	=3	Button 1 jump to page x. x is 0..5 for page 1..6.
J2	=2	Button 2 jump to page x. x is 0..5 for page 1..6.
J3	=1	Button 3 jump to page x. x is 0..5 for page 1..6.
J4	=0	Button 4 jump to page x. x is 0..5 for page 1..6.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element to send 4 x 1-bit values.

PRESS = Value sent push button 1, Value sent push button 2,...

Example

1-bit-Quad-Value-Pushbutton-Picture 	1-bit-Quad-Value-Pushbutton-Picture
Bells 	Bells; IMGSETS=BELL; PRESS=1, 1, 1, 1
No Buttons 	No Buttons; IMGSETS=BELL, AL, HC; N=3; NOBG
Door and Window 	Door and Window; IMGSETS=DOOR, WINDOW; N=2; PRESS=0, 1; ICO=DOOR

4.2. 1 Byte

Image	Nr. Data type	Element Type Format
1-Byte-Value-Text-Button 0..255 	10	1-Byte-Value-Text-Button 0..255
	2x 1 Byte	W, B+, B-, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Picture-Button 0..255 	11	1-Byte-Value-Picture-Button 0..255
	2x 1 Byte	W, IMGSET, IMGVAL, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Slider 0..255 	12	1-Byte-Value-Slider 0..255
	2x 1 Byte	W, ICO, PF, MIN, MAX, REP, RDRQ, PIN, AL, AH
1-Byte-Value-Text-Button -128..127 	13	1-Byte-Value-Text-Button -128..127
	2x 1 Byte	W, B+, B-, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Picture-Button -128..127 	14	1-Byte-Value-Picture-Button -128..127
	2x 1 Byte	W, IMGSET, IMGVAL, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Slider -128..127 	15	1-Byte-Value-Slider -128..127
	2x 1 Byte	W, ICO, PF, MIN, MAX, REP, RDRQ, PIN, AL, AH
1-Byte-Value-Text-Button 0..100% 	16	1-Byte-Value-Text-Button 0..100%
	2x 1 Byte	W, B+, B-, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Picture-Button 0..100% 	17	1-Byte-Value-Picture-Button 0..100%
	2x 1 Byte	W, IMGSET, IMGVAL, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Slider 0..100% 	18	1-Byte-Value-Slider 0..100%
	2x 1 Byte	W, ICO, PF, MIN, MAX, REP, RDRQ, PIN, AL, AH
1-Byte-Value-Text-Button 0..360° 	19	1-Byte-Value-Text-Button 0..360°
	2x 1 Byte	W, B+, B-, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Picture-Button 0..360° 	20	1-Byte-Value-Picture-Button 0..360°
	2x 1 Byte	W, IMGSET, IMGVAL, ICO, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
1-Byte-Value-Slider 0..360° 	21	1-Byte-Value-Slider 0..360°
	2x 1 Byte	W, ICO, PF, MIN, MAX, REP, RDRQ, PIN, AL, AH
1-Byte-Value-Pushbutton 	41	1-Byte-Value-Pushbutton
	2x 1 Byte	LABEL, PRESS, RELEASE, IMG, ICO, JUMP, NOBG, PIN, LOGIC, LOGICR
1-Byte-Quad-Value/Change 0..255 	89	1-Byte-Quad-Value/Change 0..255
	4x 1 Byte	LABELS, PRESS, IMGSETS, ICO, TC, PF, N, RDRQ
1-Byte-Quad-Value/Change -128..+127 	90	1-Byte-Quad-Value/Change -128..+127
	4x 1 Byte	LABELS, PRESS, IMGSETS, ICO, TC, PF, N, RDRQ
1-Byte-Quad-Value/Change 0..100% 	91	1-Byte-Quad-Value/Change 0..100%
	4x 1 Byte	LABELS, PRESS, IMGSETS, ICO, TC, PF, N, RDRQ
1-Byte-Quad-Value/Change 0..360° 	92	1-Byte-Quad-Value/Change 0..360°
	4x 1 Byte	LABELS, PRESS, IMGSETS, ICO, TC, PF, N, RDRQ

4.2.1. 1-Byte-Value-Text-Button 0..255

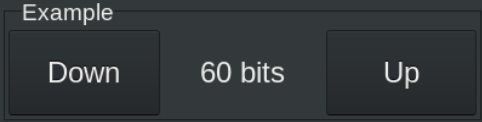
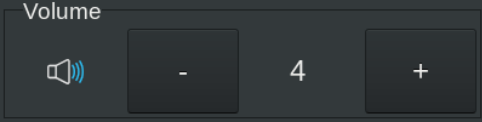
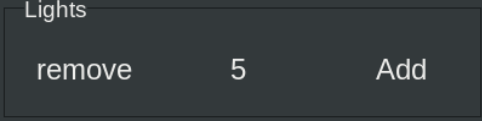
Element Type Nr. 10

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values.

Example

1-Byte-Value-Text-Button 0..255 	1-Byte-Value-Text-Button 0..255
Example 	Example; B+=Up; B-=-Down; MIN=0; MAX=200; STEPS=10; REP=1000; PF=bits
Volume 	Volume; B+=+; B-=-; MIN=0; MAX=11; STEPS=11; ICO=SOUND_up
Lights 	Lights; B+=Add; B-=-remove; MIN=0; MAX=10; STEPS=10; NOBG

e2 / subject to change

4.2.2. 1-Byte-Value-Picture-Button 0..255

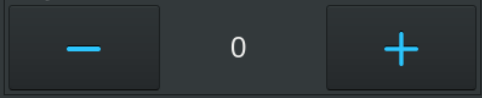
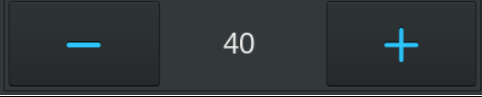
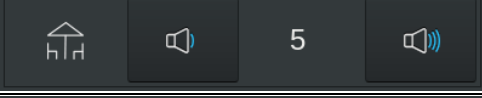
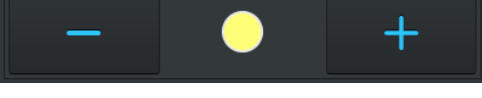
Element Type Nr. 11

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
IMGVAL	=LIGHTQUAL	Group object value dependent icon set. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values.

Example

1-Byte-Value-Picture-Button 0..255 	1-Byte-Value-Picture-Button 0..255
Example 	Example; IMGSET=PM; MIN=0; MAX=200; STEPS=10; REP=1000
Volume 	Volume; IMGSET=SOUND; MIN=0; MAX=11; STEPS=11; ICO=TERRACE
Volume 	Volume; IMGSET=SOUND; MIN=0; MAX=11; STEPS=11; NOBG
Light Color 	Light Color; IMGSET=PM; IMGVAL=LIGHTQUAL; STEPS=7

e2 / subject to change

4.2.3. 1-Byte-Value-Slider 0..255

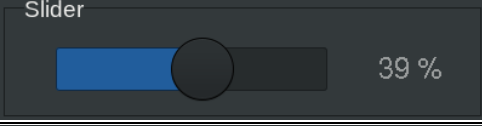
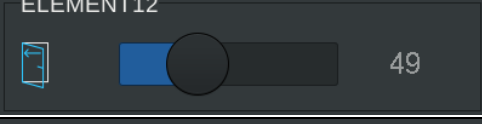
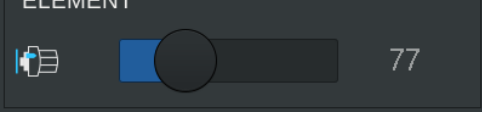
Element Type Nr. 12

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values.

Example

	1-Byte-Value-Slider 0..255
	Slider;MIN=20;MAX=55;PF=%
	ELEMENT12;ICO=DOOR_b_on;MIN=20;MAX=100;W=1
	ELEMENT;ICO=VENTIL_COOLING;W=1

4.2.4. 1-Byte-Value-Text-Button -128..127

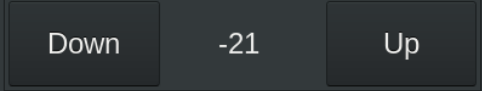
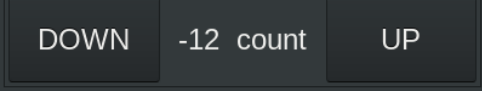
Element Type Nr. 13

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values.

Example

1-Byte-Value-Text-Button -128..127 	1-Byte-Value-Text-Button -128..127
Example 	Example; B+=UP; B-=DOWN; MIN=-128; MAX=128; STEPS=37; PF=count
Volume 	Volume; B+=+; B-= -; MIN=-11; MAX=11; STEPS=22; ICO=SOUND_up
Volume 	Volume; IB+=UP; B-=DOWN; MIN=-11; MAX=11; STEPS=22; NOBG

e2 / subject to change

4.2.5. 1-Byte-Value-Picture-Button -128..127

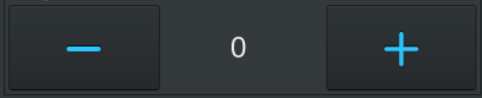
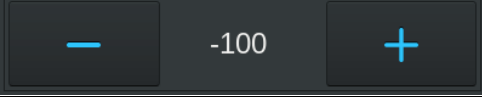
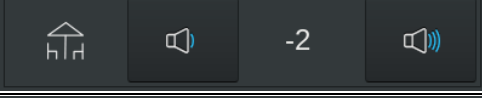
Element Type Nr. 14

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
IMGVAL	=LIGHTQUAL	Group object value dependent icon set. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values.

Example

1-Byte-Value-Picture-Button -128..127 	1-Byte-Value-Picture-Button -128..127
Example 	Example; IMGSET=PM; MIN=-100; MAX=100; STEPS=10; REP=1000
Volume 	Volume; IMGSET=SOUND; MIN=-11; MAX=11; STEPS=22; ICO=TERRACE
Volume 	Volume; IMGSET=SOUND; MIN=-11; MAX=11; STEPS=22; NOBG
Light 	Light; IMGSET=PM; IMGVAL=traffic_light; MIN=0; MAX=2

e2 / subject to change

4.2.6. 1-Byte-Value-Slider -128..127

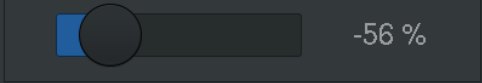
Element Type Nr. 15

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values.

Example

1-Byte-Value-Slider -128..127 	1-Byte-Value-Slider -128..127
Slider 	Slider;MIN=-100;MAX=100;PF=%
ELEMENT 	ELEMENT;ICO=DOOR_b_on;MIN=20;MAX=100;W=1
ELEMENT 	ELEMENT;ICO=VENTIL_COOLING;W=1

4.2.7. 1-Byte-Value-Text-Button 0..100%

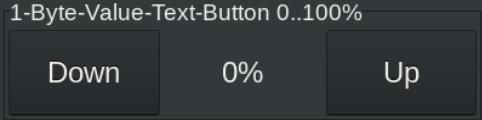
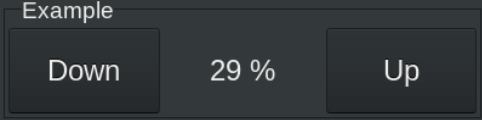
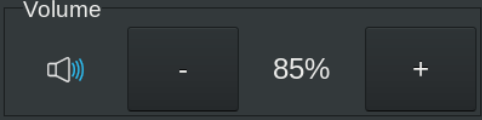
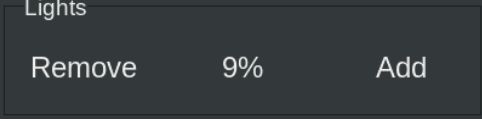
Element Type Nr. 16

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values 0..255 displayed as 0..100%.

Example

1-Byte-Value-Text-Button 0..100% 	1-Byte-Value-Text-Button 0..100%
Example 	Example; B+=Up; B- =Down; MIN=10; MAX=50; STEPS=4; REP=1000; PF= %
Volume 	Volume; B+=+; B--=; STEPS=20; ICO=SOUND_up
Lights 	Lights; B+=Add; B-=Remove; MIN=0; MAX=10; STEPS=10; NOBG

e2 / subject to change

4.2.8. 1-Byte-Value-Picture-Button 0..100%

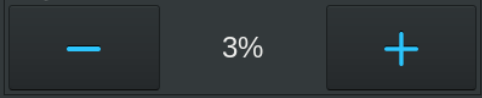
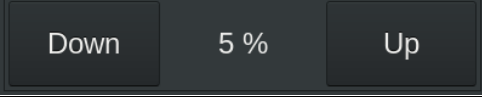
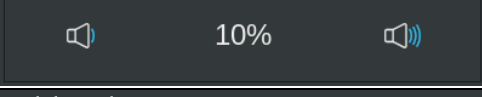
Element Type Nr. 17

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
IMGVAL	=LIGHTQUAL	Group object value dependent icon set. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values 0..255 displayed as 0..100%.

Example

1-Byte-Value-Picture-Button 0..100% 	1-Byte-Value-Picture-Button 0..100%
Example 	Example; IMGSET=PM; PF= %
Volume 	Volume; IMGSET=SOUND; MIN=0; MAX=50; ICO=TERRACE
Volume 	Volume; IMGSET=SOUND; MIN=0; MAX=11; STEPS=11; NOBG
Light Color 	Light Color; IMGSET=PM; IMGVAL=LIGHTQUAL; STEPS=7

e2 / subject to change

4.2.9. 1-Byte-Value-Slider 0..100%

Element Type Nr. 18

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values 0..255 displayed as 0..100%.

Example

	1-Byte-Value-Slider 0..100%
	Slider;MIN=50;MAX=100;PF=%
	ELEMENT;ICO=DOOR_b_on;MIN=20;MAX=100;W=1
	ELEMENT;ICO=VENTIL_COOLING;W=1

4.2.10. 1-Byte-Value-Text-Button 0..360°

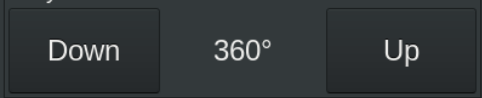
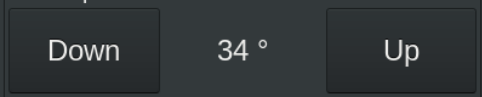
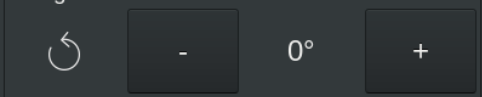
Element Type Nr. 19

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values 0..255 displayed as 0..360°.

Example

1-Byte-Value-Text-Button 0..360° 	1-Byte-Value-Text-Button 0..360°
Example 	Example; B+=Up; B- =Down; MIN=0; MAX=180; STEPS=10; REP=1000; PF= °
Angle 	Angle; B+=+; B-=-; MIN=0; MAX=90; ICO=ACK_b_off
Angle 	Angle; B+=Add; B-=Remove; MIN=0; MAX=10; STEPS=10; NOBG

e2 / subject to change

4.2.11. 1-Byte-Value-Picture-Button 0..360°

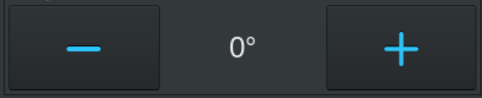
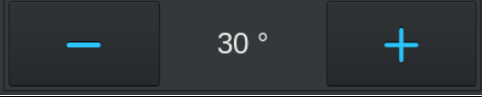
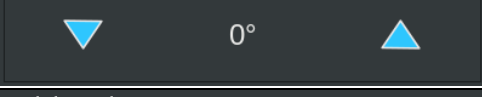
Element Type Nr. 20

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
IMGVAL	=LIGHTQUAL	Group object value dependent icon set. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values 0..255 displayed as 0..360°.

Example

1-Byte-Value-Picture-Button 0..360° 	1-Byte-Value-Picture-Button 0..360°
Example 	Example; IMGSET=PM; PF= °
Angle 	Angle; IMGSET=UPDOWN5; MIN=0; MAX=90; ICO=ACK_b_off
Angle 	Angle; IMGSET=UPDOWN5; MIN=0; MAX=10; STEPS=10; NOBG
Light Color 	Light Color; IMGSET=PM; IMGVAL=LIGHTQUAL; STEPS=7

e2 / subject to change

4.2.12. 1-Byte-Value-Slider 0..360°

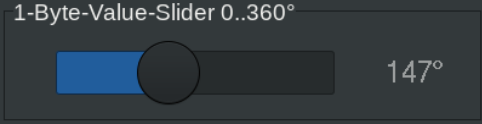
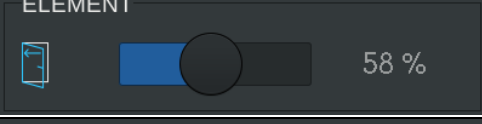
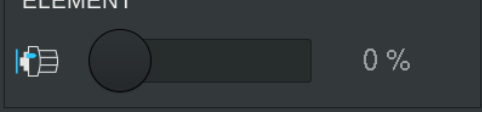
Element Type Nr. 21

ETS Group Objects		
A IO, Value	1 Byte	Main group object.
B Input, Feedback	1 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 1-Byte values 0..255 displayed as 0..360°.

Example

	1-Byte-Value-Slider 0..360°
	Slider;MIN=180;MAX=360;PF=deg
	ELEMENT;ICO=DOOR_b_on;MIN=20;MAX=100;W=1
	ELEMENT;ICO=VENTIL_COOLING;W=1

4.2.13. 1-Byte-Value-Pushbutton

Element Type Nr. 41

ETS Group Objects		
A Output, Value	1 Byte	Main group object. Sends values on PRESS and/or RELEASE.
B Output, Value B	1 Byte	If this group object is connected, object A sends values on PRESS and object B sends on RELEASE.
N/A		
N/A		
Format		
LABEL =Test		Text on the button.
PRESS =1		Value sent on button press.
RELEASE =0		Value sent on button release.
IMG =TERRACE		Icon displayed on the button. Icon name without file extension.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
JUMP =2		Jump to page number x on button press.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName (arg)		Call a LUA logic function on button press.
LOGICR =fooName (arg)		Call a LUA logic function on button release.

Info

Element to send 1-Byte values on button press and/or release.

Example

1-Byte-Value-Pushbutton	1-Byte-Value-Pushbutton
	
	; PRESS=42; IMG=SEND
Play	Play; PRESS=11; RELEASE=33; IMG=PLAY
	
Stop	Stop; RELEASE=22; LABEL=Stop; TC=red
	
Play	Play; RELEASE=0; LABEL=Play; ICO=SAUNA; TC=green
	
	

e2 / subject to change

4.2.14. 1-Byte-Quad-Value/Change 0..255

Element Type Nr. 89

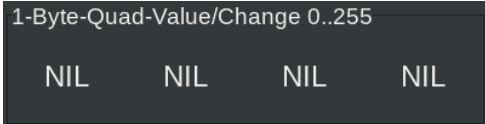
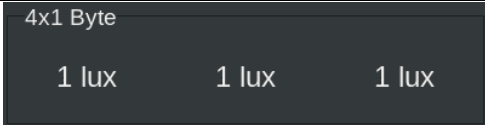
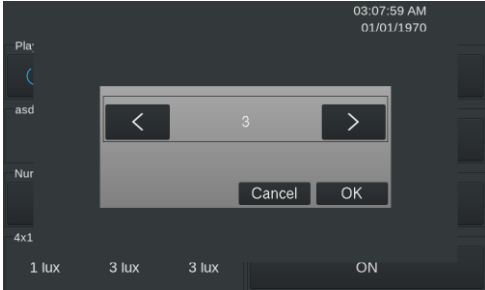
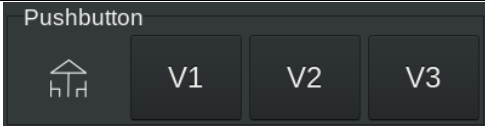
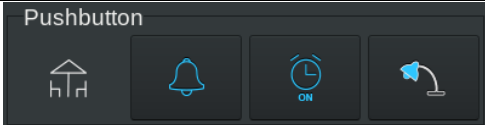
ETS Group Objects		
A Input, Value 1	1 Byte	Group object for the associated channel.
A Input, Value 2	1 Byte	Group object for the associated channel.
A Input, Value 3	1 Byte	Group object for the associated channel.
A Input, Value 4	1 Byte	Group object for the associated channel.
Format		
LABELS	=ON,OFF,ON,OFF	Text for each button.
PRESS	=10,0,100,0	Value for each button sent on press. The values are the raw 1 byte values, unscaled.
IMGSETS	=BELL,AL,LIGHT	Icon set used for the button/s. The argument is the icon sets name without file extension and without suffix, separated by comma.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
N	=2	Number of buttons displayed.
RDRQ		Send a read request for the group object/s on startup.

Info

Element to send and receive four 1-Byte values.

If PRESS is defined the element becomes a quad pushbutton element. In this case LABELS or IMGSETS can be used to set text labels or images for the pushbuttons. The values defined with PRESS are send to the associated group objects.

Example

	1-Byte-Quad-Value/Change 0..255
	4x1 Byte;N=3;PF=lux;
	Value change menu.
	Pushbutton;N=3;PRESS=1,2,3;LABELS=V1,V2,V3;ICO=TERRACE
	Pushbutton;N=3;PRESS=1,2,3;IMGSETS=BELL,AL,LIGHT3;ICO=TERRACE

e2 / subject to change

4.2.15. 1-Byte-Quad-Value/Change -128..+127

Element Type Nr. 90

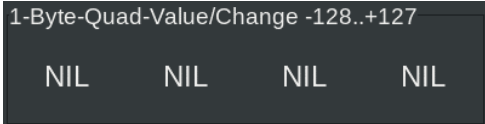
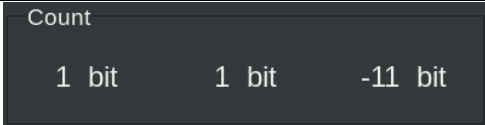
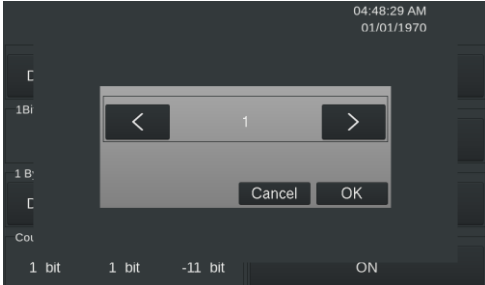
ETS Group Objects		
A Input, Value 1	1 Byte	Group object for the associated channel.
A Input, Value 2	1 Byte	Group object for the associated channel.
A Input, Value 3	1 Byte	Group object for the associated channel.
A Input, Value 4	1 Byte	Group object for the associated channel.
Format		
LABELS	=ON,OFF,ON,OFF	Text for each button.
PRESS	=10,0,100,0	Value for each button sent on press. The values are the raw 1 byte values, unscaled.
IMGSETS	=BELL,AL,LIGHT	Icon set used for the button/s. The argument is the icon sets name without file extension and without suffix, separated by comma.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
N	=2	Number of buttons displayed.
RDRQ		Send a read request for the group object/s on startup.

Info

Element to send and receive four 1-Byte values.

If PRESS is defined the element becomes a quad pushbutton element. In this case LABELS or IMGSETS can be used to set text labels or images for the pushbuttons. The values defined with PRESS are send to the associated group objects.

Example

	1-Byte-Quad-Value/Change -128..+127
	Count;N=3;PF= bit;
	Value change menu.
	Pushbutton;N=3;PRESS=-1,0,1;LABELS=V-1,V0,V1;ICO=TERRACE
	Pushbutton;N=3;PRESS=-1,0,1;IMGSETS=BELL,AL,LIGHT3;ICO=TERRACE

e2 / subject to change

4.2.16. 1-Byte-Quad-Value/Change 0..100%

Element Type Nr. 91

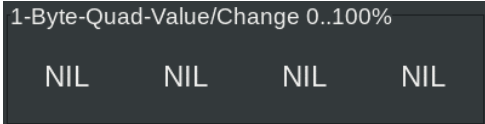
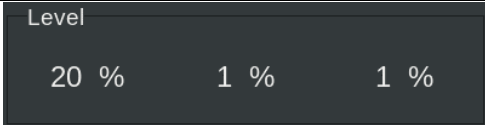
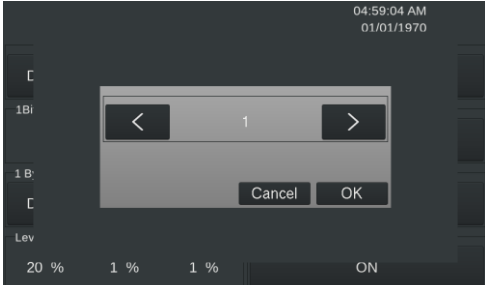
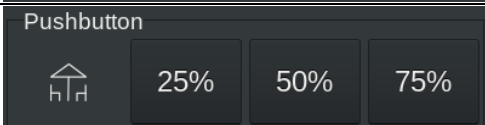
ETS Group Objects		
A Input, Value 1	1 Byte	Group object for the associated channel.
A Input, Value 2	1 Byte	Group object for the associated channel.
A Input, Value 3	1 Byte	Group object for the associated channel.
A Input, Value 4	1 Byte	Group object for the associated channel.
Format		
LABELS	=ON,OFF,ON,OFF	Text for each button.
PRESS	=10,0,100,0	Value for each button sent on press. The values are the raw 1 byte values, unscaled.
IMGSETS	=BELL,AL,LIGHT	Icon set used for the button/s. The argument is the icon sets name without file extension and without suffix, separated by comma.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
N	=2	Number of buttons displayed.
RDRQ		Send a read request for the group object/s on startup.

Info

Element to send and receive four 1-Byte values.

If PRESS is defined the element becomes a quad pushbutton element. In this case LABELS or IMGSETS can be used to set text labels or images for the pushbuttons. The values defined with PRESS are send to the associated group objects.

Example

	1-Byte-Quad-Value/Change 0..100%
	Level;N=3;PF= %;
	Value change menu.
	Pushbutton;N=3;PRESS=64,128,191;LABELS=25%,50%,75%;ICO=TERRACE
	Pushbutton;N=3;PRESS=64,128,191;IMGSETS=BELL,AL,LIGHT3;ICO=TERRACE

4.2.17. 1-Byte-Quad-Value/Change 0..360°

Element Type Nr. 92

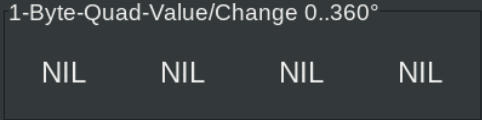
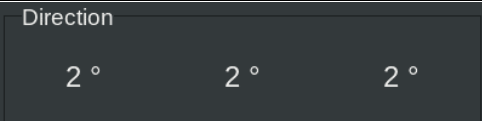
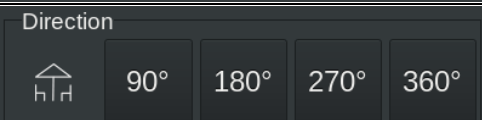
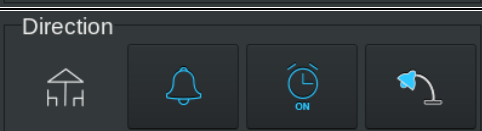
ETS Group Objects		
A Input, Value 1	1 Byte	Group object for the associated channel.
A Input, Value 2	1 Byte	Group object for the associated channel.
A Input, Value 3	1 Byte	Group object for the associated channel.
A Input, Value 4	1 Byte	Group object for the associated channel.
Format		
LABELS	=ON,OFF,ON,OFF	Text for each button.
PRESS	=10,0,100,0	Value for each button sent on press. The values are the raw 1 byte values, unscaled.
IMGSETS	=BELL,AL,LIGHT	Icon set used for the button/s. The argument is the icon sets name without file extension and without suffix, separated by comma.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
N	=2	Number of buttons displayed.
RDRQ		Send a read request for the group object/s on startup.

Info

Element to send and receive four 1-Byte values.

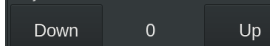
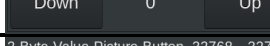
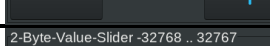
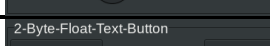
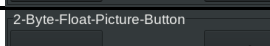
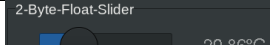
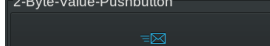
If PRESS is defined the element becomes a quad pushbutton element. In this case LABELS or IMGSETS can be used to set text labels or images for the pushbuttons. The values defined with PRESS are send to the associated group objects.

Example

1-Byte-Quad-Value/Change 0..360° 	1-Byte-Quad-Value/Change 0..360°
Direction 	Direction;N=3;PF=°
Direction 	Direction;PRESS=64,128,192,255;LABELS=90°,180°,270°,360°;ICO=TERRACE
Direction 	Direction;N=3;PRESS=64,128,192;IMGSETS=BELL,AL,LIGHT 3;ICO=TERRACE

e2 / subject to change

4.3. 2 Byte

Image	Nr. Data type	Element Type Format
2-Byte-Value-Text-Button 0..65535 	22 2x 2 Byte	2-Byte-Value-Text-Button 0..65535 W, B+, B-, ICO, TC, LCOL, BCOL, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
2-Byte-Value-Picture-Button 0..65535 	23 2x 2 Byte	2-Byte-Value-Picture-Button 0..65535 W, IMGSET, ICO, TC, LCOL, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
2-Byte-Value-Slider 0..65535 	24 2x 2 Byte	2-Byte-Value-Slider 0..65535 W, ICO, PF, MIN, MAX, REP, RDRQ, PIN, AL, AH
2-Byte-Value-Text-Button -32768 .. 32767 	25 2x 2 Byte	2-Byte-Value-Text-Button -32768 .. 32767 W, B+, B-, ICO, TC, LCOL, BCOL, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
2-Byte-Value-Picture-Button -32768 .. 32767 	26 2x 2 Byte	2-Byte-Value-Picture-Button -32768 .. 32767 W, IMGSET, ICO, TC, LCOL, PF, STEPS, MIN, MAX, REP, NOBG, RDRQ, PIN, AL, AH
2-Byte-Value-Slider -32768 .. 32767 	27 2x 2 Byte	2-Byte-Value-Slider -32768 .. 32767 W, ICO, PF, MIN, MAX, REP, RDRQ, PIN, AL, AH
2-Byte-Float-Text-Button 	30 2x 2 Byte	2-Byte-Float-Text-Button W, B+, B-, ICO, TC, LCOL, BCOL, PF, DC, STEPS, MIN, MAX, *, REP, NOBG, RDRQ, PIN, AL, AH
2-Byte-Float-Picture-Button 	31 2x 2 Byte	2-Byte-Float-Picture-Button W, IMGSET, ICO, TC, LCOL, PF, DC, STEPS, MIN, MAX, *, REP, NOBG, RDRQ, PIN, AL, AH
2-Byte-Float-Slider 	32 2x 2 Byte	2-Byte-Float-Slider W, ICO, PF, DC, MIN, MAX, *, REP, RDRQ, PIN, AL, AH
2-Byte-Value-Pushbutton 	42 2x 2 Byte	2-Byte-Value-Pushbutton LABEL, PRESS, RELEASE, IMG, ICO, TC, JUMP, NOBG, PIN, LOGIC, LOGICR
2-Byte-Float-Value-Pushbutton 	43 2x 2 Byte	2-Byte-Float-Value-Pushbutton LABEL, PRESS, RELEASE, IMG, ICO, TC, JUMP, NOBG, PIN, LOGIC, LOGICR

4.3.1. 2-Byte-Value-Text-Button 0..65535

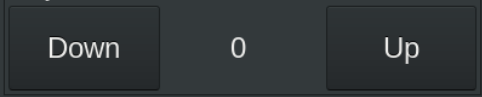
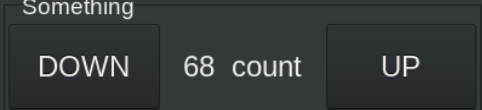
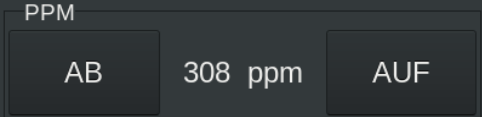
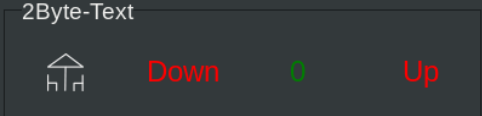
Element Type Nr. 22

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

2-Byte-Value-Text-Button 0..65535 	2-Byte-Value-Text-Button 0..65535
Something 	Something;PF= count;B+=UP;B-=DOWN;MIN=50;MAX=200;STEPS=75
PPM 	PPM;PF= ppm;B+=AUF;B-=AB; MIN=300; MAX=1100;STEPS=400
2Byte-Text 	2Byte-Text;ICO=TERRACE;BCOL=red;LCOL=green;NOBG

e2 / subject to change

4.3.2. 2-Byte-Value-Picture-Button 0..65535

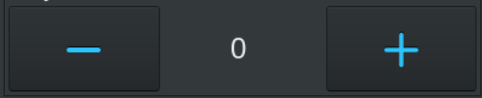
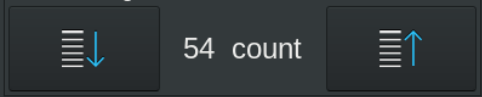
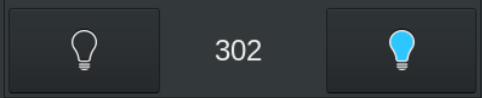
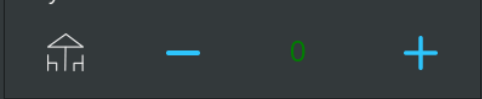
Element Type Nr. 23

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

2-Byte-Value-Picture-Button 0..65535 	2-Byte-Value-Picture-Button 0..65535
Something 	Something; IMGSET=SHUTTER; PF=count; MIN=50; MAX=200; STEPS=75
PPM 	PPM; IMGSET=LIGHT1; MIN=300; MAX=1100; STEPS=400
2Byte-Picture 	2Byte-Picture; ICO=TERRACE; TC=green; NOBG

e2 / subject to change

4.3.3. 2-Byte-Value-Slider 0..65535

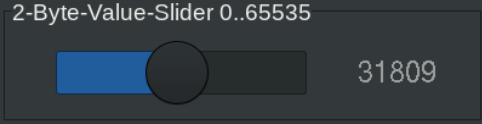
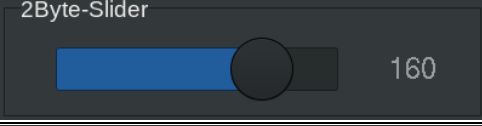
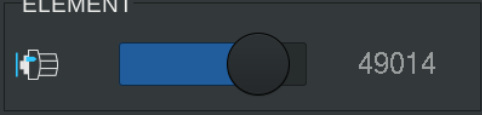
Element Type Nr. 24

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

	2-Byte-Value-Slider 0..65535
	2Byte-Slider;MIN=50;MAX=200
	ELEMENT;ICO=VENTIL_COOLING;W=1

4.3.4. 2-Byte-Value-Text-Button -32768 .. 32767

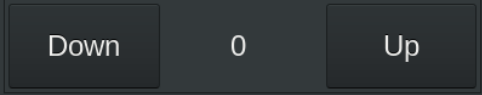
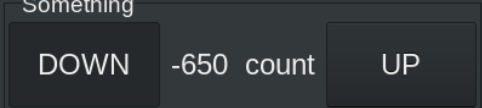
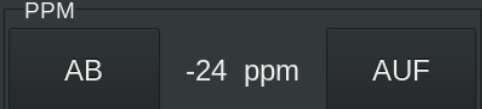
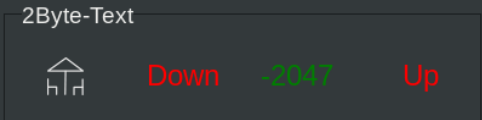
Element Type Nr. 25

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCO	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

2-Byte-Value-Text-Button -32768 .. 32767 	2-Byte-Value-Text-Button -32768 .. 32767
Something 	Something;PF= count;B+=UP;B-=DOWN; MIN=-2000; MAX=100
PPM 	PPM;PF= ppm;B+=AUF;B-=AB; MIN=-300; MAX=800; STEPS=400
2Byte-Text 	2Byte-Text; ICO=TERRACE;BCOL=red;LCO=green;NOBG

e2 / subject to change

4.3.5. 2-Byte-Value-Picture-Button -32768 .. 32767

Element Type Nr. 26

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

2-Byte-Value-Picture-Button -32768 .. 32767	2-Byte-Value-Picture-Button -32768 .. 32767
Something	Something;IMGSET=SHUTTER;PF= count; MIN=-3000; MAX=-100
PPM	PPM; IMGSET=LIGHT1; MIN=-20000; MAX=10000
2Byte-Picture	2Byte-Picture; ICO=TERRACE; TC=green; NOBG

e2 / subject to change

4.3.6. 2-Byte-Value-Slider -32768 .. 32767

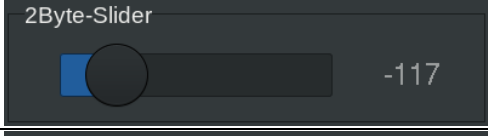
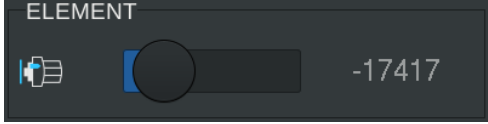
Element Type Nr. 27

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

	2-Byte-Value-Slider -32768 .. 32767
	2Byte-Slider;MIN=-200;MAX=200
	ELEMENT;ICO=VENTIL_COOLING;W=1

4.3.7. 2-Byte-Float-Text-Button

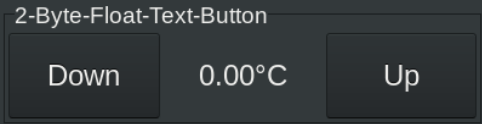
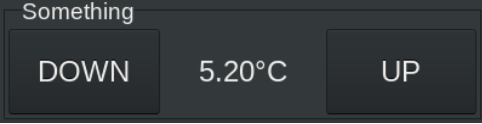
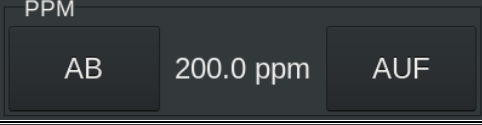
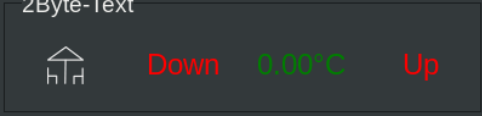
Element Type Nr. 30

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOl	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
DC	=2	Number of decimal places displayed.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
*	=100	Multiplier for the displayed value.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

2-Byte-Float-Text-Button 	2-Byte-Float-Text-Button
Something 	Something; PF=°C; B+=UP; B-=DOWN; MIN=-10; MAX=30
PPM 	PPM; PF= ppm; B+=AUF; B-=AB; MIN=0; MAX=10; DC=1; *=100; STEPS=5
2Byte-Text 	2Byte-Text; ICO=TERRACE; BCOL=red; LCOL=green; NOBG

e2 / subject to change

4.3.8. 2-Byte-Float-Picture-Button

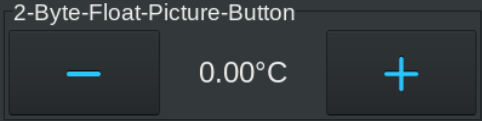
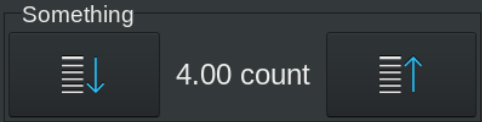
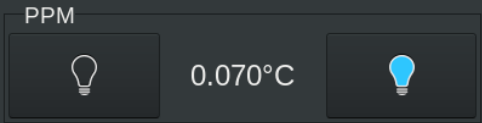
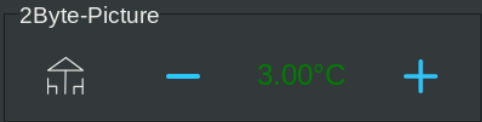
Element Type Nr. 31

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
DC	=2	Number of decimal places displayed.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
*	=100	Multiplier for the displayed value.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

2-Byte-Float-Picture-Button 	2-Byte-Float-Picture-Button
Something 	Something; IMGSET=SHUTTER; PF= count
PPM 	PPM; IMGSET=LIGHT1; DC=3; *=0.01;
2Byte-Picture 	2Byte-Picture; ICO=TERRACE; TC=green; NOBG

e2 / subject to change

4.3.9. 2-Byte-Float-Slider

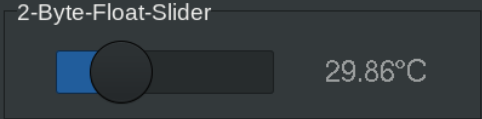
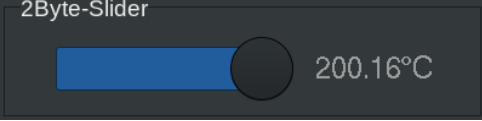
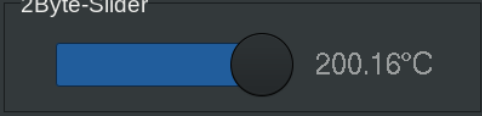
Element Type Nr. 32

ETS Group Objects		
A IO, Value	2 Byte	Main group object.
B Input, Feedback	2 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
DC	=2	Number of decimal places displayed.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
*	=100	Multiplier for the displayed value.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 2-Byte values.

Example

	2-Byte-Float-Slider
	2Byte-Slider;MIN=-200.2;MAX=200.2
	ELEMENT;ICO=VENTIL_COOLING;W=1

e2 / subject to change

4.3.10. 2-Byte-Value-Pushbutton

Element Type Nr. 42

ETS Group Objects		
A Output, Value	2 Byte	Main group object. Sends values on PRESS and/or RELEASE.
B Output, Value B	2 Byte	If this group object is connected, object A sends values on PRESS and object B sends on RELEASE.
N/A		
N/A		
Format		
LABEL =Test		Text on the button.
PRESS =1		Value sent on button press.
RELEASE =0		Value sent on button release.
IMG =TERRACE		Icon displayed on the button. Icon name without file extension.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
JUMP =2		Jump to page number x on button press.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName(arg)		Call a LUA logic function on button press.
LOGICR =fooName(arg)		Call a LUA logic function on button release.

Info

Element to send 2-Byte integer values on button press and/or release.

Example

2-Byte-Value-Pushbutton	2-Byte-Value-Pushbutton
	
	; PRESS=42; IMG=SEND
Play	Play; PRESS=11; RELEASE=33; IMG=PLAY
	
Stop	Stop; RELEASE=22; LABEL=Stop; TC=red
	
Play	Play; RELEASE=0; LABEL=Play; ICO=SAUNA; TC=green
	

e2 / subject to change

4.3.11. 2-Byte-Float-Value-Pushbutton

Element Type Nr. 43

ETS Group Objects		
A Output, Value	2 Byte	Main group object. Sends values on PRESS and/or RELEASE.
B Output, Value B	2 Byte	If this group object is connected, object A sends values on PRESS and object B sends on RELEASE.
N/A		
N/A		
Format		
LABEL	=Test	Text on the button.
PRESS	=1	Value sent on button press.
RELEASE	=0	Value sent on button release.
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
JUMP	=2	Jump to page number x on button press.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC	=fooName(arg)	Call a LUA logic function on button press.
LOGICR	=fooName(arg)	Call a LUA logic function on button release.

Info

Element to send 2-Byte float values on button press and/or release.

Example

2-Byte-Float-Value-Pushbutton	2-Byte-Float-Value-Pushbutton
	; PRESS=42.2; IMG=SEND
Play	Play; PRESS=11.1; RELEASE=33.1; IMG=PLAY
Stop	Stop; RELEASE=22.1; LABEL=Stop; TC=red
Play	Play; RELEASE=0.0; LABEL=Play; ICO=SAUNA; TC=green

4.4. 3 Byte

Image	Nr.	Element Type
	Data type	Format
3-Byte-Time 00:00:00	50	3-Byte-Time
	2x3 Byte	ICO, TC, ACTUAL, LONG, RDRQ, PIN
3-Byte-Date 00/00/00	51	3-Byte-Date
	2x3 Byte	ICO, TC, ACTUAL, LONG, RDRQ, PIN

4.4.1. 3-Byte-Time

Element Type Nr. 50

ETS Group Objects		
A IO, Time	3 Byte	Main group object.
B Input, Feedback	3 Byte	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
ACTUAL		Display the system time/date instead of group object values.
LONG		Use long formatting.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element to send and receive a 3-Byte Time values.

If ACTUAL is used, the group objects become inactive and the submenu is disabled.

Example

	3-Byte-Time
	3-byte-time;ICO=CLOCK_ICO;ACTUAL
	3-byte-time;ICO=CLOCK_ICO;LONG;TC=red
	Pressing the value will open a dialog box. By pressing the OK button, the time is sent on the associated group object.

4.4.2. 3-Byte-Date

Element Type Nr. 51

ETS Group Objects		
A IO, Time	3 Byte	Main group object.
B Input, Feedback	3 Byte	Optional feedback group object. If connected, group object A becomes output only.
N/A		
N/A		
Format		
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
ACTUAL		Display the system time/date instead of group object values.
LONG		Use long formatting.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

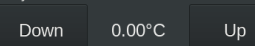
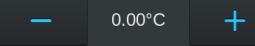
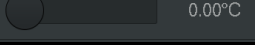
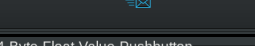
Element to send and receive a 3-Byte Date values.

If ACTUAL is used, the group objects become inactive and the submenu is disabled.

Example

	3-Byte-Date
	3-byte-date; ICO=CLOCK_ICO; ACTUAL
	3-byte-date; ICO=CLOCK_ICO; LONG; TC=red
	Pressing the value will open a dialog box. By pressing the OK button, the date is sent on the associated group object.

4.5. 4 Byte

Image	Nr.	Element Type
	Data type	Format
4-Byte-Float-Text-Button 	33	4-Byte-Float-Text-Button
	2x4 Byte	W, B+, B-, ICO, TC, LCOL, BCOL, PF, DC, STEPS, MIN, MAX, *, REP, INT, UINT, NOBG, RDRQ, PIN, AL, AH
4-Byte-Float-Picture-Button 	34	4-Byte-Float-Picture-Button
	2x4 Byte	W, IMGSET, ICO, TC, LCOL, PF, DC, STEPS, MIN, MAX, *, REP, INT, UINT, NOBG, RDRQ, PIN, AL, AH
4-Byte-Float-Slider 	35	4-Byte-Float-Slider
	2x4 Byte	W, ICO, PF, DC, MIN, MAX, *, REP, INT, UINT, RDRQ, PIN, AL, AH
4-Byte-Value-Pushbutton 	44	4-Byte-Value-Pushbutton
	2x4 Byte	LABEL, PRESS, RELEASE, IMG, ICO, TC, JUMP, NOBG, PIN, LOGIC, LOGICR
4-Byte-Float-Value-Pushbutton 	45	4-Byte-Float-Value-Pushbutton
	2x4 Byte	LABEL, PRESS, RELEASE, IMG, ICO, TC, JUMP, NOBG, PIN, LOGIC, LOGICR

4.5.1. 4-Byte-Float-Text-Button

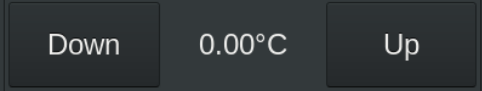
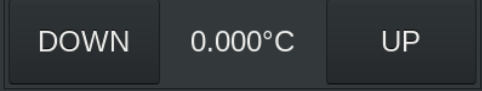
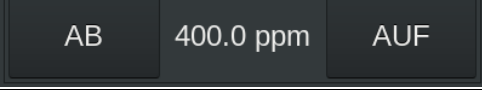
Element Type Nr. 33

ETS Group Objects		
A IO, Value	4 Byte	Main group object.
B Input, Feedback	4 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
DC	=2	Number of decimal places displayed.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
*	=100	Multiplier for the displayed value.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
INT		Shift of number range to 4 Byte integer. DPT13.*
UINT		Shift of number range to 4 Byte unsigned integer. DPT12.*
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 4-Byte values.

Example

4-Byte-Float-Text-Button 	4-Byte-Float-Text-Button
Something 	Something; PF=°C; B+=UP; B-=DOWN; MIN=-10; MAX=10; DC=3; STEPS=20000
PPM 	PPM; PF= ppm; B+=AUF; B-=AB; MIN=0; MAX=10; DC=1; *=100; STEPS=5
2Byte-Text 	2Byte-Text; ICO=TERRACE; BCOL=red; LCOL=green; NOBG

e2 / subject to change

4.5.2. 4-Byte-Float-Picture-Button

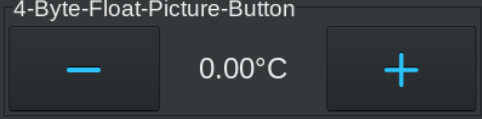
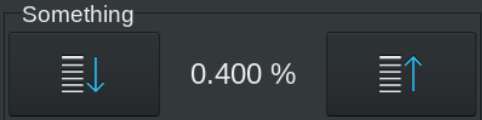
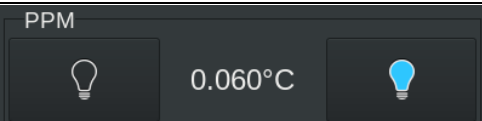
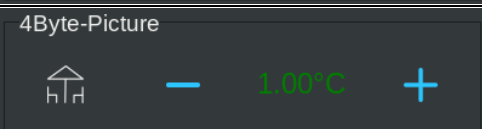
Element Type Nr. 34

ETS Group Objects		
A IO, Value	4 Byte	Main group object.
B Input, Feedback	4 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
DC	=2	Number of decimal places displayed.
STEPS	=5	Number of steps between MIN and MAX.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
*	=100	Multiplier for the displayed value.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
INT		Shift of number range to 4 Byte integer. DPT13.*
UINT		Shift of number range to 4 Byte unsigned integer. DPT12.*
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 4-Byte values.

Example

	4-Byte-Float-Picture-Button
	Something;IMGSET=SHUTTER;PF= %;MIN=-10; MAX=30;DC=3
	PPM; IMGSET=LIGHT1;DC=3; *=0.01;
	4Byte-Picture; ICO=TERRACE;TC=green;NOBG

e2 / subject to change

4.5.3. 4-Byte-Float-Slider

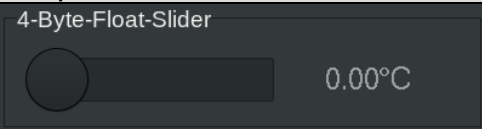
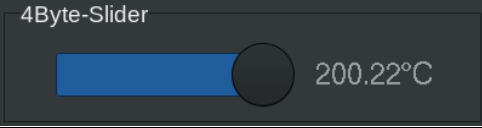
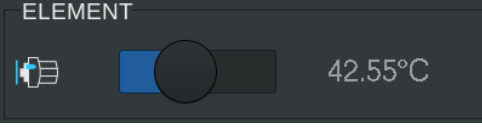
Element Type Nr. 35

ETS Group Objects		
A IO, Value	4 Byte	Main group object.
B Input, Feedback	4 Byte	Optional feedback group object. If connected, group object A remains input and output.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PF	= °C	Unit displayed after the value.
DC	=2	Number of decimal places displayed.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
*	=100	Multiplier for the displayed value.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
INT		Shift of number range to 4 Byte integer. DPT13.*
UINT		Shift of number range to 4 Byte unsigned integer. DPT12.*
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
AL	=0	Alarm lower limit. Only works on alarm Page.
AH	=1	Alarm upper limit. Only works on alarm Page.

Info

Element to send and receive a 4-Byte values.

Example

4-Byte-Float-Slider 	4-Byte-Float-Slider
4Byte-Slider 	4Byte-Slider;MIN=-200.22;MAX=200.22
ELEMENT 	ELEMENT;ICO=VENTIL_COOLING;W=1

e2 / subject to change

4.5.4. 4-Byte-Value-Pushbutton

Element Type Nr. 44

ETS Group Objects		
A Output, Value	4 Byte	Main group object. Sends values on PRESS and/or RELEASE.
B Output, Value B	4 Byte	If this group object is connected, object A sends values on PRESS and object B sends on RELEASE.
N/A		
N/A		
Format		
LABEL =Test		Text on the button.
PRESS =1		Value sent on button press.
RELEASE =0		Value sent on button release.
IMG =TERRACE		Icon displayed on the button. Icon name without file extension.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
JUMP =2		Jump to page number x on button press.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName(arg)		Call a LUA logic function on button press.
LOGICR =fooName(arg)		Call a LUA logic function on button release.

Info

Element to send 4-Byte integer values on button press and/or release.

Example

4-Byte-Value-Pushbutton 	4-Byte-Value-Pushbutton
4Byte OFF	4Byte;PRESS=-6500; LABEL=OFF
4Byte 	4Byte;PRESS=10050; IMG=BELL_b_on;
Stop Stop	Stop;RELEASE=22; LABEL=Stop;TC=red
Play  Play	Play;RELEASE=0.0; LABEL=Play; ICO=SAUNA;TC=green

e2 / subject to change

4.5.5. 4-Byte-Float-Value-Pushbutton

Element Type Nr. 45

ETS Group Objects		
A Output, Value	4 Byte	Main group object. Sends values on PRESS and/or RELEASE.
B Output, Value B	4 Byte	If this group object is connected, object A sends values on PRESS and object B sends on RELEASE.
N/A		
N/A		
Format		
LABEL =Test		Text on the button.
PRESS =1		Value sent on button press.
RELEASE =0		Value sent on button release.
IMG =TERRACE		Icon displayed on the button. Icon name without file extension.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
JUMP =2		Jump to page number x on button press.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC =fooName(arg)		Call a LUA logic function on button press.
LOGICR =fooName(arg)		Call a LUA logic function on button release.

Info

Element to send 4-Byte float values on button press and/or release.

Example

4-Byte-Float-Value-Pushbutton	4-Byte-Float-Value-Pushbutton
	
	; PRESS=42.2; IMG=SEND
Play	Play; PRESS=11.1; RELEASE=33.1; IMG=PLAY
	
Stop	Stop; RELEASE=22.1; LABEL=Stop; TC=red
	
Play	Play; RELEASE=0.0; LABEL=Play; ICO=SAUNA; TC=green
	
	

4.6. 14 Byte

Image	Nr.	Element Type
	Data type	Format
14-Byte-String-Pushbutton 	46	14-Byte-String-Pushbutton
	1x14 Byte	LABEL, PRESS, RELEASE, IMG, ICO, TC, JUMP, NOBG, PIN, LOGIC, LOGICR
14-Byte-String Hello World!	52	14-Byte-String
	1x14 Byte	TEXT, ICO, TC, RDRQ

4.6.1. 14-Byte-String-Pushbutton

Element Type Nr. 46

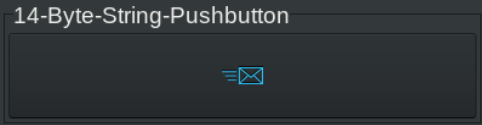
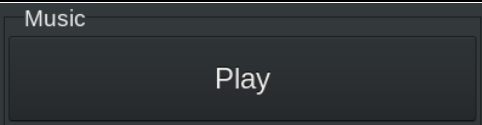
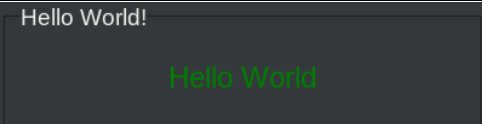
ETS Group Objects		
A Output, String	14 Byte	Main group object. Sends values on PRESS and/or RELEASE.
N/A		
N/A		
N/A		
Format		
LABEL	=Test	Text on the button.
PRESS	=1	Value sent on button press.
RELEASE	=0	Value sent on button release.
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
JUMP	=2	Jump to page number x on button press.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
LOGIC	=fooName (arg)	Call a LUA logic function on button press.
LOGICR	=fooName (arg)	Call a LUA logic function on button release.

Info

Element to send 14-Byte String values on button press and/or release.

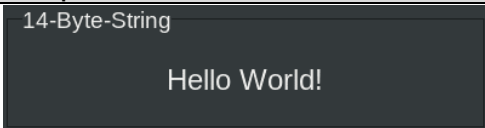
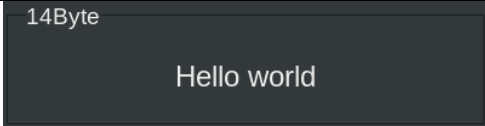
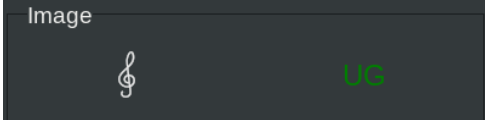
If PRESS or RELEASE is set to KEYPAD, a sub dialog opens on button pressed/released. With this menu a custom 14 Byte string can be entered and send by pressing OK.

Example

	14-Byte-String-Pushbutton
	Music;PRESS=PLAY; LABEL=Play;
	Keypad;PRESS=OPEN ;RELEASE=KEYPAD; IMG=CHECK_b_off
	If PRESS or RELEASE is set to KEYPAD, a sub dialog opens on button pressed/released.
	Hello World!;LABEL=Hello World;PRESS=World;NOBG;TC=green;LOGICR=sys.message('world')

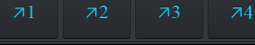
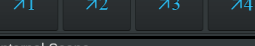
4.6.2. 14-Byte-String

Element Type Nr. 52

ETS Group Objects		
A Input, String	14 Byte	Main group object.
N/A		
N/A		
N/A		
Format		
TEXT	=Hallo	Default text.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
RDRQ		Send a read request for the group object/s on startup.
Info		
Element to receive 14-Byte String values.		
Example		
14-Byte-String		14-Byte-String
		
14Byte		14Byte;TEXT=Hello world
		
Image		Image;ICO=TREBLE;TC=green;TEXT=UG
		

e2 / subject to change

4.7. Scene Control

Image	Nr.	Element Type
	Data type	Format
Scene-Control-Recall-Save 	55 4x1 Byte	Scene-Control-Recall-Save NAMES, IMAGES, ICO, TC, TO, N, MOD, SCENES, NOBG, PIN, PPIN
Scene-Control-Recall-Only 	56 4x1 Byte	Scene-Control-Recall-Only NAMES, IMAGES, ICO, N, MOD, SCENES, NOBG, PIN
Scene-Control-Save-Only 	57 4x1 Byte	Scene-Control-Save-Only NAMES, IMAGES, ICO, N, MOD, SCENES, NOBG, PIN
Internal-Scene 	58 4x1 Byte	Internal-Scene ICO, NOBG, SELECT, PLAYONLY, PLAYSTOP, ONSTART, SCGRP

4.7.1. Scene-Control-Recall-Save

Element Type Nr. 55

ETS Group Objects		
A Output, Scene Control 1	1 Byte	Group object.
B Output, Scene Control 2	1 Byte	Group object.
C Output, Scene Control 3	1 Byte	Group object.
D Output, Scene Control 4	1 Byte	Group object.
Format		
NAMES	=Day,Night,Relax	Text for each button.
IMAGES	=,,BELL_1_off	Icons used for the buttons, overwriting text NAMES. Icon name without file extension, comma separated.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
TO	=500	Time period to differentiate between short and long button press, in milliseconds.
N	=2	Number of buttons displayed.
MOD	=SINGLE	Available arguments see info box.
SCENES	=4,8,16	Scene/Scenes to activate or learn. Value 0 is DPT18.001 scene 1.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN	=4242	Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

Info

Element to activate and learn up to 4 scenes with DPT 18.001.

In default configuration the element activates a scene on short button press and learns it on a long button press. The default scenes are 1..4 on the four buttons. All communication is done over group object "A Output, Scene Control 1".

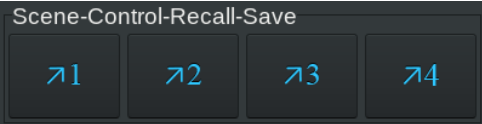
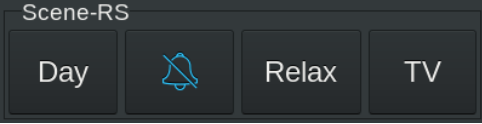
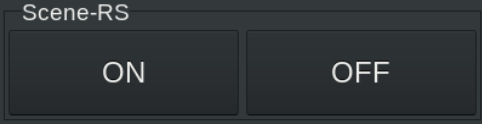
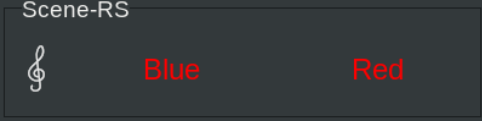
Possible arguments for the MODE parameter are:

SINGLE: learn and activate via group object "A Output, Scene Control 1".

DUAL: learn via group object "B Output, Scene Control 2" and activate via group object "A Output, Scene Control 1". Only for this mode learn and activate send the same value (0..64).

DIFF: Each group object "X Output, Scene Control X" learns and activates independently with the associated button.

Example

	Scene-Control-Recall-Save
	Scene-RS; TO=1000; IMAGES=,BELL_1_off; NAMES=Day,Night,Relax,TV; SCENES=4,8,16,32
	Scene learn dialog.
	Scene-RS; N=2; NAMES=ON,OFF; MOD=DUAL
	Scene-RS; N=2; NAMES=Blue,Red; TC=red; ICO=TREBLE; MOD=DIFF; NOBG; PIN=1234; PPIN=4321

e2 / subject to change

4.7.2. Scene-Control-Recall-Only

Element Type Nr. 56

ETS Group Objects		
A Output, Scene Control 1	1 Byte	Group object.
B Output, Scene Control 2	1 Byte	Group object.
C Output, Scene Control 3	1 Byte	Group object.
D Output, Scene Control 4	1 Byte	Group object.
Format		
NAMES	=Day,Night,Relax	Text for each button.
IMAGES	=,,BELL_1_off	Icons used for the buttons, overwriting text NAMES. Icon name without file extension, comma separated.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
N	=2	Number of buttons displayed.
MOD	=SINGLE	Available arguments see info box.
SCENES	=4,8,16	Scene/Scenes to activate or learn. Value 0 is DPT18.001 scene 1.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element to activate up to 4 scenes with DPT 18.001.

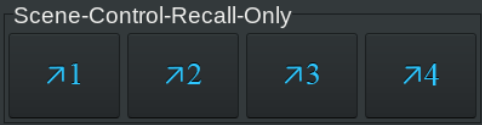
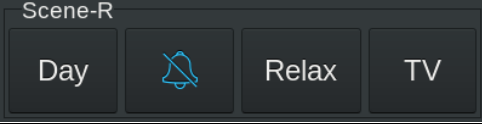
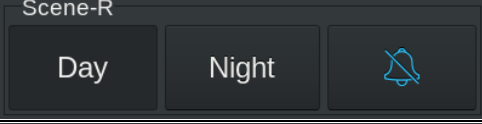
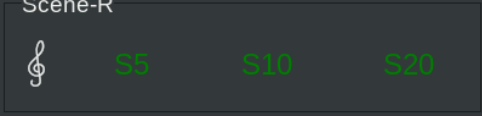
In default configuration the element activates a scene on short button press. The default scenes are 1..4 on the four buttons. All communication is done over group object "A Output, Scene Control 1".

Possible arguments for the MODE parameter are:

SINGLE: activate via group object "A Output, Scene Control 1".

DIFF: Each group object "X Output, Scene Control X" activates independently with the associated button.

Example

	Scene-Control-Recall-Only
	Scene-R;MOD=DIFF;IMAGES=,BELL_1_off;NAMES=Day,Night,Relax,TV;SCENES=4,8,16,32
	Scene-R;N=3;IMAGES=,,BELL_1_off;NAMES=Day,Night,Relax;SCENES=4,8,16
	Scene-R;N=3;NAMES=S5,S10,S20;SCENES=4,9,19;NOBG;ICO=TREBLE;TC=green

4.7.3. Scene-Control-Save-Only

Element Type Nr. 57

ETS Group Objects		
A Output, Scene Control 1	1 Byte	Group object.
B Output, Scene Control 2	1 Byte	Group object.
C Output, Scene Control 3	1 Byte	Group object.
D Output, Scene Control 4	1 Byte	Group object.
Format		
NAMES	=Day,Night,Relax	Text for each button.
IMAGES	=,,BELL_1_off	Icons used for the buttons, overwriting text NAMES. Icon name without file extension, comma separated.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
N	=2	Number of buttons displayed.
MOD	=SINGLE	Available arguments see info box.
SCENES	=4,8,16	Scene/Scenes to activate or learn. Value 0 is DPT18.001 scene 1.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element to learn up to 4 scenes with DPT 18.001.

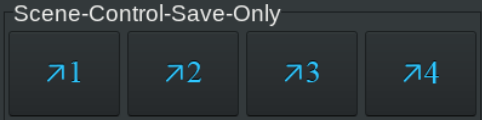
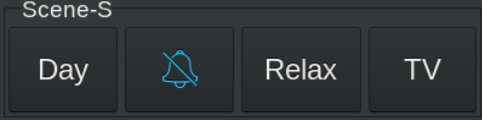
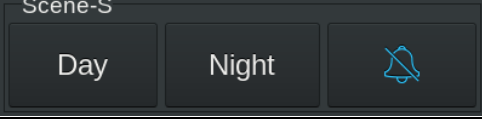
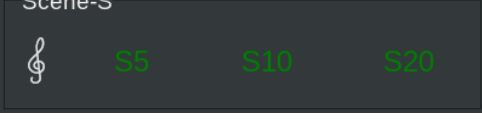
In default configuration the element learns a scene on short button press. The default scenes are 1..4 on the four buttons. All communication is done over group object "A Output, Scene Control 1".

Possible arguments for the MODE parameter are:

SINGLE: learn via group object "A Output, Scene Control 1".

DIFF: Each group object "X Output, Scene Control X" learns independently with the associated button.

Example

	Scene-Control-Save-Only
	Scene-S; MOD=DIFF; IMAGES=,BELL_1_off; NAMES=Day,Night,Relax,TV; SCENES=4,8,16,32
	Scene-S; N=3; IMAGES=,BELL_1_off; NAMES=Day,Night,Relax; SCENES=4,8,16
	Scene-S; N=3; NAMES=S5,S10,S20; SCENES=4,9,19; NOBG; ICO=TREBLE; TC=green

4.7.4. Internal-Scene

Element Type Nr. 58

ETS Group Objects		
A Input, Trigger	1 Bit	Start/stop sequence execution.
B IO, Enable	1 Bit	Disable ability to start sequence with group object "A Input, Trigger".
N/A		
N/A		
Format		
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
SELECT =62,66,70		Limits the selectable group objects in the submenu by their object number.
PLAYONLY		Only display the play button.
PLAYSTOP		Only display the play and stop button.
ONSTART		Automatically start sequence execution on device start up.
SCGRP =1		Defines the group number of this Internal-Scene element. If an Internal-Scene is started all other Internal-Scenes with the same SCGRP number are stopped. (x: 1..16)

Info

With this element it is possible to write values to group objects of other active element types. This is done by opening a submenu and defining up to 32 actions to create a sequence. After pressing play or triggering it via group object "A Input, Trigger" the sequence is executed. One action can be defined as "loop", which starts sequence again, until the stop or pause button is pressed or until it is stopped by the group object. It is possible to define a delay for each action. Group object "B IO, Enable" only affects group object "A Input, Trigger", it is still possible to start the sequence by pressing the button.

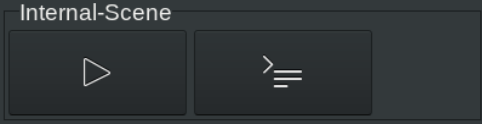
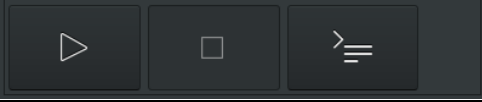
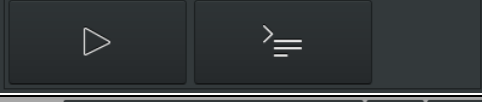
Only group objects with a connected group address are available in the submenu.

The object name in the submenu is generated by following means in descending priority:

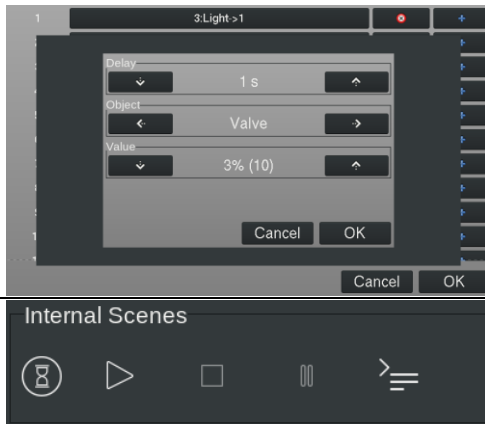
- Parameter INAME defined in the element types "Name [;Format]" field. E.g. "Door;INAME=Main Door;" would display "Main Door" in the submenu.
- Name defined in the "Name [;Format]" field. E.g., "Door;" would display "Door" in the submenu.
- Group object number. E.g., Object.247

Supported object types are: 1 bit, 1 Byte, 2 Byte Float, Scene

Example

		Internal-Scene
		Internal Scenes;PLAYSTOP;
		Internal Scenes;PLAYONLY;
		Submenu. Insert actions before by pressing +, delete actions with x.

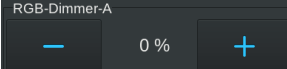
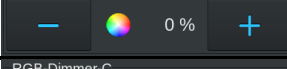
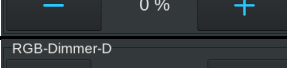
e2 / subject to change



Subsubmenu for setting up the action.

Internal Scenes;ICO=TIMER_ICO;NOBG

4.8. Light/RGB Control

Image	Nr.	Element Type
	Data type	Format
	76	RGB-Dimmer-A
	4x1 Byte	W, B+, B-, IMGSET, ICO, BCOL, STEPS, RGBH, RGBW, NOBG, RDRQ, PIN
	77	RGB-Dimmer-B
	4x1 Byte	W, B+, B-, IMGSET, ICO, BCOL, STEPS, RGBH, RGBW, NOBG, RDRQ, PIN
	78	RGB-Dimmer-C
	4x1 Byte	W, B+, B-, IMGSET, ICO, BCOL, STEPS, RGBH, RGBW, NOBG, RDRQ, PIN
	79	RGB-Dimmer-D
	4x1 Byte	W, B+, B-, IMGSET, ICO, BCOL, STEPS, RGBH, RGBW, NOBG, RDRQ, PIN

e2 / subject to change

4.8.1. RGB-Dimmer-A

Element Type Nr. 76

ETS Group Objects		
A Output, Red	1 Byte	Value red channel.
B Output, Green	1 Byte	Value green channel.
C Output, Blue	1 Byte	Value blue channel.
D Output, White	1 Byte	Value white (or brightness) channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
STEPS	=5	Number of steps between MIN and MAX.
RGBH		RGB + brightness. See info box.
RGBW		RGB + white. See info box.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

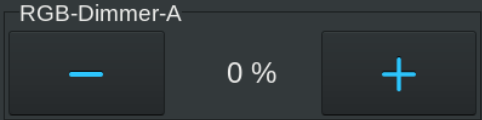
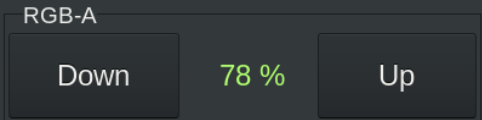
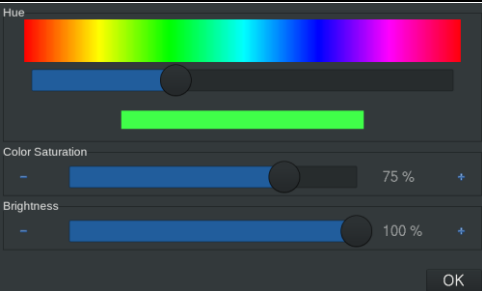
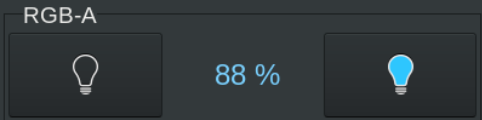
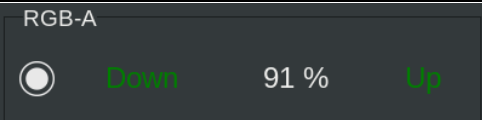
Info

With this element it is possible to select a color and output the 1 byte red, green, blue values with an optional 1 byte white value. It is also possible to dim and turn on/off the output with the buttons on the left and right.
If the color is altered in the submenu the values of the group objects are updated with every change.

Pressing the value/icon opens the color submenu.
A short button press switches ON/OFF, 0%/100%.
A long button press dims the values up/down.

Default: W = max(R,G,B). The buttons change the values of all group objects.
RGBW: W = min(R,G,B). The buttons change the values of all group objects.
RGBH: The submenu changes the values of the R,G,B group objects. The buttons change the value of the W group object.

Example

	RGB-Dimmer-A
	RGB-A; B-=Down; B+=Up; STEPS=10;
	Submenu for color adjustment. Opened by pressing on the value.
	RGB-A; IMGSET=LIGHT1; RGBW;
	RGB-A; B-=Down; B+=Up; NOBG; BCOL=green; ICO=ACT_b_off

e2 / subject to change

4.8.2. RGB-Dimmer-B

Element Type Nr. 77

ETS Group Objects		
A Output, Red	1 Byte	Value red channel.
B Output, Green	1 Byte	Value green channel.
C Output, Blue	1 Byte	Value blue channel.
D Output, White	1 Byte	Value white (or brightness) channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
STEPS	=5	Number of steps between MIN and MAX.
RGBH		RGB + brightness. See info box.
RGBW		RGB + white. See info box.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

With this element it is possible to select a color and output the 1 byte red, green, blue values with an optional 1 byte white value. It is also possible to dim and turn on/off the output with the buttons on the left and right.
If the color is altered in the submenu the values of the group objects are updated with every change.

Pressing the value/icon opens the color submenu.
A short button press switches ON/OFF, 0%/100%.
A long button press dims the values up/down.

Default: W = max(R,G,B). The buttons change the values of all group objects.
RGBW: W = min(R,G,B). The buttons change the values of all group objects.
RGBH: The submenu changes the values of the R,G,B group objects. The buttons change the value of the W group object.

Example

	RGB-Dimmer-B
	RGB-B; B-=Down; B+=Up; STEPS=10;
	Submenu for color adjustment. Opened by pressing on the color wheel icon.
	RGB-B; IMGSET=LIGHT1; RGBW;
	RGB-B; B-=Down; B+=Up; NOBG; BCOL=green; ICO=ACT_b_off

e2 / subject to change

4.8.3. RGB-Dimmer-C

Element Type Nr. 78

ETS Group Objects		
A Output, Red	1 Byte	Value red channel.
B Output, Green	1 Byte	Value green channel.
C Output, Blue	1 Byte	Value blue channel.
D Output, White	1 Byte	Value white (or brightness) channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
STEPS	=5	Number of steps between MIN and MAX.
RGBH		RGB + brightness. See info box.
RGBW		RGB + white. See info box.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

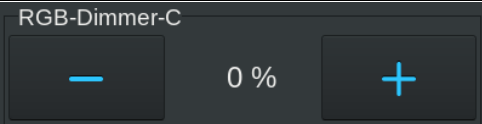
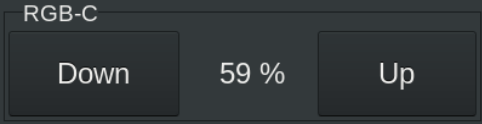
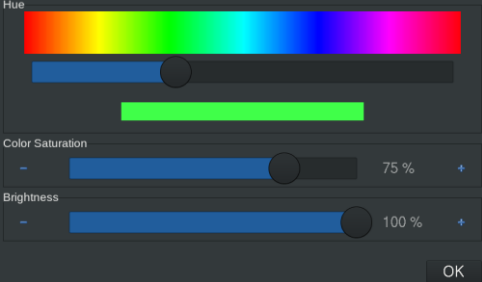
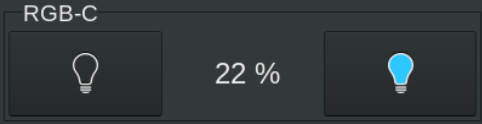
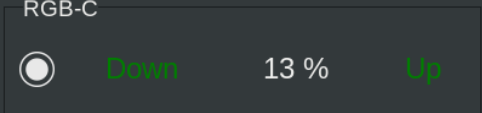
Info

With this element it is possible to select a color and output the 1 byte red, green, blue values with an optional 1 byte white value. It is also possible to dim the output with the buttons on the left and right.
If the color is altered in the submenu the values of the group objects are updated with every change.

Pressing the value/icon opens the color submenu.
A short button press dims the values up/down.

Default: W = max(R,G,B). The buttons change the values of all group objects.
RGBW: W = min(R,G,B). The buttons change the values of all group objects.
RGBH: The submenu changes the values of the R,G,B group objects. The buttons change the value of the W group object.

Example

	RGB-Dimmer-C
	RGB-C; B-=Down; B+=Up; STEPS=10;
	Submenu for color adjustment. Opened by pressing on the value.
	RGB-C; IMGSET=LIGHT1; RGBW;
	RGB-C; B-=Down; B+=Up; NOBG; BCOL=green; ICO=ACT_b_off

e2 / subject to change

4.8.4. RGB-Dimmer-D

Element Type Nr. 79

ETS Group Objects		
A Output, Red	1 Byte	Value red channel.
B Output, Green	1 Byte	Value green channel.
C Output, Blue	1 Byte	Value blue channel.
D Output, White	1 Byte	Value white (or brightness) channel.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
STEPS	=5	Number of steps between MIN and MAX.
RGBH		RGB + brightness. See info box.
RGBW		RGB + white. See info box.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

With this element it is possible to select a color and output the 1 byte red, green, blue values with an optional 1 byte white value. It is also possible to dim the output with the buttons on the left and right.
If the color is altered in the submenu the values of the group objects are updated with every change.

Pressing the value/icon opens the color submenu.
A short button press dims the values up/down.

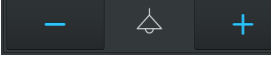
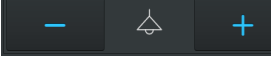
Default: W = max(R,G,B). The buttons change the values of all group objects.
RGBW: W = min(R,G,B). The buttons change the values of all group objects.
RGBH: The submenu changes the values of the R,G,B group objects. The buttons change the value of the W group object.

Example

	RGB-Dimmer-D
	RGB-D; B-=Down; B+=Up; STEPS=10;
	Submenu for color adjustment. Opened by pressing on the color wheel icon.
	RGB-D; IMGSET=LIGHT1; RGBW;
	RGB-D; B-=Down; B+=Up; NOBG; BCOL=green; ICO=ACT_b_off

e2 / subject to change

4.9. Dimmer Control

Image	Nr.	Element Type
	Data type	Format
4-Bit-Dimmer-Start-Stop 	70	4-Bit-Dimmer-Start-Stop
	2x 1 Bit 1x 4 Bit 1x 1 Byte	W, L0, L1, B+, B-, IMGSET, ICO, TC, LCOL, BCOL, STEPS, TO, REP, NOBG, RDRQ, PIN
4-Bit-Dimmer-Repeat 	71	4-Bit-Dimmer-Repeat
	2x 1 Bit 1x 4 Bit 1x 1 Byte	W, L0, L1, B+, B-, IMGSET, ICO, TC, LCOL, BCOL, STEPS, TO, REP, NOBG, RDRQ, PIN
	72	8-Bit-Dimmer-Repeat
	2x 1 Bit 2x 1 Byte	W, L0, L1, B+, B-, IMGSET, ICO, TC, LCOL, BCOL, STEPS, TO, REP, NOBG, RDRQ, PIN

e2 / subject to change

4.9.1. 4-Bit-Dimmer-Start-Stop

Element Type Nr. 70

ETS Group Objects		
A Output, ON/OFF	1 Bit	Output for short button press.
B Input, ON OFF Feedback	1 Bit	Feedback for displayed ON/OFF state.
C Output, Dimming	4 Bit	Output for long button press.
D Input, Value Feedback	1 Byte	0..100% value feedback, displayed between the buttons.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
L0	=Off	Text on the label for value 0.
L1	=On	Text on the label for value 1.
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
STEPS	=10	Number of steps between 0 and 100%.
TO	=500	Time period to differentiate between short and long button press, in milliseconds.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

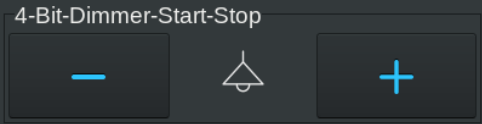
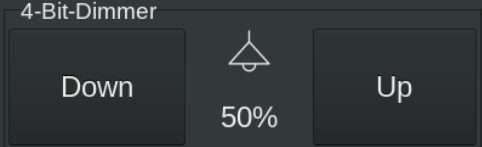
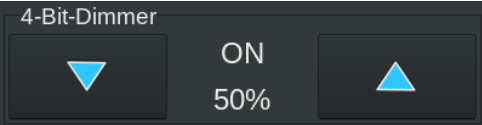
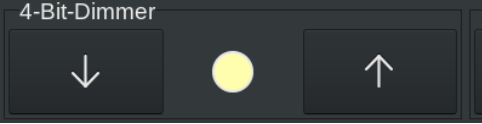
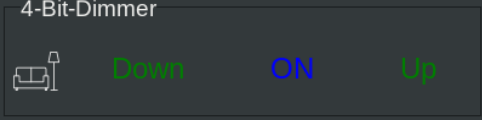
Info

4-bit dimmer element. Send increase/decrease by x percent on long button press and break on button release. Displays the on/off state and if values are sent to group object "D Input, Value Feedback" they are displayed between the buttons, scaled to 0..100%.

A short button press switches group object "A Output, ON/OFF".

A long button press dims group object "C Output, Dimming".

Example

	4-Bit-Dimmer-Start-Stop
	4-Bit-Dimmer; B-=Down; B+=Up; STEP=10;
	4-Bit-Dimmer; IMGSET=UPDOWN5; L0=OFF; L1=ON
	4-Bit-Dimmer; IMGSET=UPDOWN4; IMGVAL=LIGHTQUAL; L0=OFF; L1=ON
	4-Bit-Dimmer; B-=Down; B+=Up; L0=OFF; L1=ON; ICO=LIVING; LCOL=blue; BCOL=green; NOBG

e2 / subject to change

4.9.2. 4-Bit-Dimmer-Repeat

Element Type Nr. 71

ETS Group Objects		
A Output, ON/OFF	1 Bit	Output for short button press.
B Input, ON OFF Feedback	1 Bit	Feedback for displayed ON/OFF state.
C Output, Dimming	4 Bit	Output for long button press.
D Input, Value Feedback	1 Byte	0..100% value feedback, displayed between the buttons.
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
L0 =Off		Text on the label for value 0.
L1 =On		Text on the label for value 1.
B+ =Up		Text on plus button.
B- =Down		Text on minus button.
IMGSET =ONOFF		Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL =#FF0000		Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL =green		Button text color. HTML color name (red) or HEX color codes (#FF0000).
STEPS =10		Number of steps between 0 and 100%.
TO =500		Time period to differentiate between short and long button press, in milliseconds.
REP =500		Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

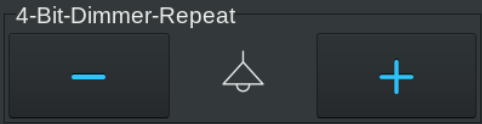
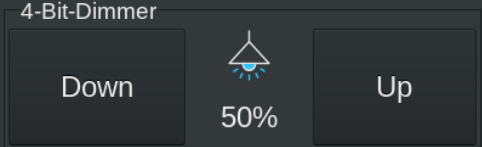
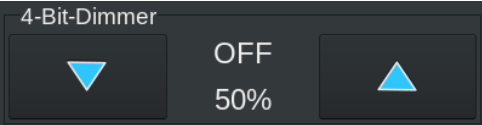
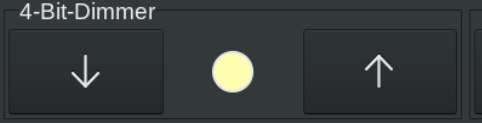
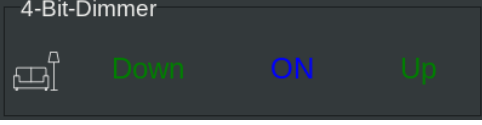
Info

4-bit dimmer element. Starts sending increase/decrease by x percent every REP milliseconds on long button press and break on button release. Displays the on/off state and if values are sent to group object "D Input, Value Feedback" they are displayed between the buttons, scaled to 0..100%.

A short button press switches group object "A Output, ON/OFF".

A long button press dims group object "C Output, Dimming".

Example

	4-Bit-Dimmer-Repeat
	4-Bit-Dimmer; B-=Down; B+=Up; STEP=10;
	4-Bit-Dimmer; IMGSET=UPDOWN5; L0=OFF; L1=ON
	4-Bit-Dimmer; IMGSET=UPDOWN4; IMGVAL=LIGHTQUAL; L0=OFF; L1=ON
	4-Bit-Dimmer; B-=Down; B+=Up; L0=OFF; L1=ON; ICO=LIVING; LCOL=blue; BCOL=green; NOBG

e2 / subject to change

4.9.3. 8-Bit-Dimmer-Repeat

Element Type Nr. 72

ETS Group Objects		
A Output, ON/OFF	1 Bit	Output for short button press.
B Input, ON OFF Feedback	1 Bit	Feedback for displayed ON/OFF state.
C Output, Value	1 Byte	Output for long button press.
D Input, Value Feedback	1 Byte	0..100% value feedback, displayed between the buttons.
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
L0 =Off		Text on the label for value 0.
L1 =On		Text on the label for value 1.
B+ =Up		Text on plus button.
B- =Down		Text on minus button.
IMGSET =ONOFF		Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL =#FF0000		Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL =green		Button text color. HTML color name (red) or HEX color codes (#FF0000).
STEPS =10		Number of steps between 0 and 100%.
TO =500		Time period to differentiate between short and long button press, in milliseconds.
REP =500		Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

8-bit dimmer element. Starts sending increasing/decreasing 1 byte values every REP milliseconds on long button press. During long button press the internal value is displayed and if group object "D Input, Value Feedback" is connected and has a value, then it is displayed upon release. The Icon displays the on/off state.

A short button press switches group object "A Output, ON/OFF".

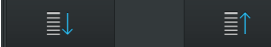
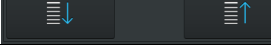
A long button press dims group object "C Output, Dimming".

Example

	8-Bit-Dimmer-Repeat
	8-Bit-Dimmer; B-=Down; B+=Up; STEP=10;
	8-Bit-Dimmer; IMGSET=UPDOWN5; L0=OFF; L1=ON
	8-Bit-Dimmer; IMGSET=UPDOWN4, IMGVAL=LIGHTQUAL; L0=OFF; L1=ON
	8-Bit-Dimmer; B-=Down; B+=Up; L0=OFF; L1=ON; ICO=LIVING; LCOL=blue; BCOL=green; NOBG

e2 / subject to change

4.10. Shutter Control

Image	Nr.	Element Type
	Data type	Format
Shutter-Blinds-Control-A 	73 2x 1 Bit 1x 1 Byte	Shutter-Blinds-Control-A W, B+, B-, IMGSET, IMGVAL, ICO, TO, NOBG, RDRQ, PIN
Shutter-Blinds-Control-B 	74 2x 1 Bit 1x 1 Byte	Shutter-Blinds-Control-B W, B+, B-, IMGSET, IMGVAL, ICO, TO, REP, NOBG, RDRQ, PIN
Shutter-Blinds-Control-C 	75 2x 1 Bit 1x 1 Byte	Shutter-Blinds-Control-C W, B+, B-, IMGSET, IMGVAL, ICO, TO, NOBG, RDRQ, PIN

4.10.1. Shutter-Blinds-Control-A

Element Type Nr. 73

ETS Group Objects		
A Output, LONG	1 Bit	Output for short button press.
B Output, SHORT	1 Bit	Output for long button press.
N/A		
D Input, Position Feedback	1 Byte	0..100% value feedback, display between the buttons.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
IMGVAL	=LIGHTQUAL	Group object value dependent icon set. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TO	=500	Time period to differentiate between short and long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Standard element for blinds and blinds with slats. The long button press is used to move blinds up/down and a short button press is used stop movement or adjust slats.
Values sent to group object "D Input, Value Feedback" are displayed between the buttons.

A short button press:

Send 1 bit trigger on group object "B Output, SHORT".

Stops blinds if they are moving. Trigger step movement for slat adjustment if blinds are stationary.

A long button press:

Send 1 bit up/down to group object "A Output, LONG".

Starts long blind movement. Interrupt movement with short button press.

Example

Shutter-Blinds-Control-A  	Shutter-Blinds-Control-A
Shutter-Blinds-Control Down 50% Up	Shutter-Blinds-Control; B-=Down; B+=Up
Shutter-Blinds-Control  30% 	Shutter-Blinds-Control; IMGSET=UPDOWN5;
Shutter-Blinds-Control  10% 	Shutter-Blinds-Control; IMGSET=UPDOWN4; IMGVAL=LIGHTQUAL
Shutter-Blinds-Controll  Down 100% Up	Shutter-Blinds-Control; B-=Down; B+=Up; ICO=LIVING; LCOL=blue; BCOL=green; NOBG

e2 / subject to change

4.10.2. Shutter-Blinds-Control-B

Element Type Nr. 74

ETS Group Objects		
A Output, LONG	1 Bit	Output long.
B Output, SHORT	1 Bit	Output short.
N/A		
D Input, Position Feedback	1 Byte	0..100% value feedback, display between the buttons.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
IMGVAL	=LIGHTQUAL	Group object value dependent icon set. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TO	=500	Time period to differentiate between short and long button press, in milliseconds.
REP	=500	Button press repetition interval in case of long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element for blinds and blinds with slats.

Values sent to group object "D Input, Value Feedback" are displayed between the buttons.

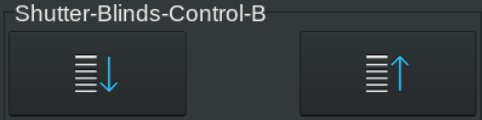
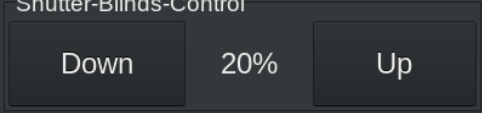
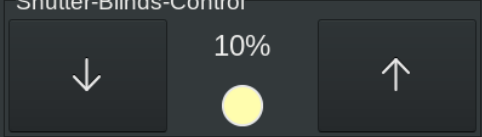
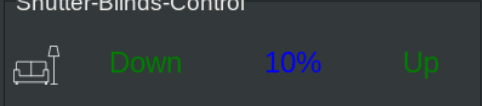
Button press:

Send 1 bit up/down to group object "B Output, SHORT" every REP ms for TO ms. After TO ms stop sending on "B Output, SHORT" and send single 1 bit up/down value is sent on group object "A Output, LONG".

Button release:

No Action.

Example

	Shutter-Blinds-Control-B
	Shutter-Blinds-Control; B-=Down; B+=Up; REP=250;
	Shutter-Blinds-Control; IMGSET=UPDOWN4; IMGVAL=LIGHTQUAL
	Shutter-Blinds-Control; B-=Down; B+=Up; ICO=LIVING; LCOL=blue; BCOL=green; NOBG

e2 / subject to change

4.10.3. Shutter-Blinds-Control-C

Element Type Nr. 75

ETS Group Objects		
A Output, LONG	1 Bit	Output long.
B Output, SHORT	1 Bit	Output short.
N/A		
D Input, Position Feedback	1 Byte	0..100% value feedback, display between the buttons.
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
B+	=Up	Text on plus button.
B-	=Down	Text on minus button.
IMGSET	=ONOFF	Icon set used for the button/s and label. The Argument is the icon sets name without file extension and without suffix.
IMGVAL	=LIGHTQUAL	Group object value dependent icon set. The Argument is the icon sets name without file extension and without suffix.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TO	=500	Time period to differentiate between short and long button press, in milliseconds.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element for blinds and blinds with slats. A long button press is used to move blinds up/down and a short button press is used stop movement or adjust slats.

Values sent to group object "D Input, Value Feedback" are displayed between the buttons.

This element is used if the actuator does not support a step command to adjust the slats. E.g. the blinds move down with closed slats and on up movement the slats open.

Normally the long button press timeout (TO) is set to a value bigger than the time it takes the slats to open/close.

Button press:

Send 1 bit up/down to group object "A Output, LONG".

Start blind/slat move.

Button release before TO ms:

Send 1 bit trigger on group object "B Output, SHORT".

Stop slat/(blind) movement.

Button release after TO ms:

Send nothing.

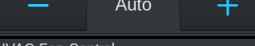
Continue long blind move. Interrupt movement with short button press.

Example

Shutter-Blinds-Control-C	Shutter-Blinds-Control-C
Shutter-Blinds-Control	Shutter-Blinds-Control; B-=Down; B+=Up; TO=3000
Shutter-Blinds-Control	Shutter-Blinds-Control; IMGSET=UPDOWN4; IMGVAL=LIGHTQUAL; TO=3000
Shutter-Blinds-Control	Shutter-Blinds-Control; B-=Down; B+=Up; ICO=LIVING; LCOL=blue; BCOL=green; NOBG; TO=3000

e2 / subject to change

4.11. HVAC Control

Image	Nr.	Element Type
	Data type	Format
	80	HVAC-Setpoint-Control
	4x 2 Byte	W, TEXT, ICO, TC, DC, STEP, T, MIN, MAX, TO, SENDONTO, NOBG, RDRQ, INTERN, MASK, PIN
	81	HVAC-Mode-Control
	1x 1 Byte 1x 2 Byte	W, ICO, TC, DC, NOBG, RDRQ, INTERN, TSET, MASK, PIN
	82	HVAC-Mode-Control-Text
	1x 1 Byte 1x 2 Byte	W, ICO, TC, LCOL, BCOL, DC, NOBG, RDRQ, INTERN, TSET, MASK, PIN
	83	HVAC-Fan-Control
	1x 1 Bit 1x 1 Byte	W, ICO, NOBG, RDRQ, INTERN, FANSTAGE

4.11.1. HVAC-Setpoint-Control

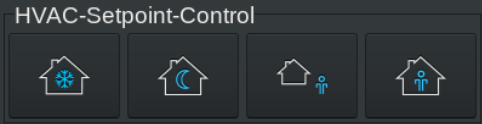
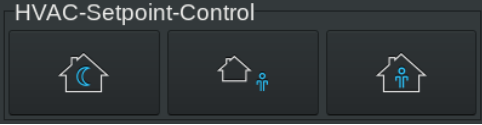
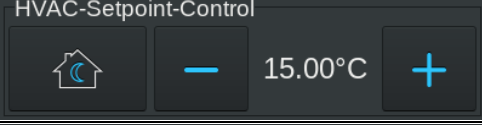
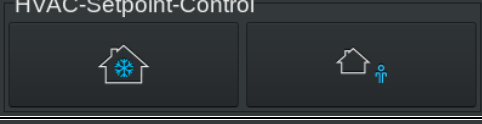
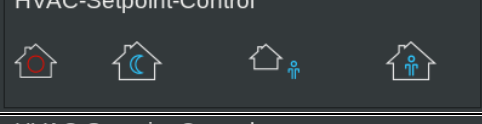
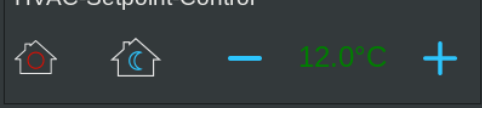
Element Type Nr. 80

ETS Group Objects		
A Output, Protection Setpoint	2 Byte	Protection mode temperature setpoint.
B Output, Night Setpoint	2 Byte	Night mode temperature setpoint.
C Output, Standby Setpoint	2 Byte	Standby mode temperature setpoint.
D Output, Comfort Setpoint	2 Byte	Comfort mode temperature setpoint.
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
TEXT		Display text instead of icons.
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
DC =2		Number of decimal places displayed.
STEP =1.5		Value change per step/button press.
T =7:15:18:22		Initial values for temperature setpoints. (T=Protection:Night:Standby:Comfort)
MIN =7:15:18:15		Upper value limit. (MIN=Protection:Night:Standby:Comfort)
MAX =8:17:20:30		Lower value limit. (MAX=Protection:Night:Standby:Comfort)
TO =500		Time period to automatically jump back from setpoint menu to standard display state, in seconds.
SENDONTO		If setpoint change is not confirmed by button press, send value after TO without user confirmation.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
INTERN		Element is connected directly to internal RTC (Room Temperature Controller), without bus communication. Group Objects can stay disconnected. Protection setpoint is removed.
MASK =1000		Mask out certain buttons/setpoints. MASK=Comfort Standby Night Protection (0:displayed,1:removed)
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

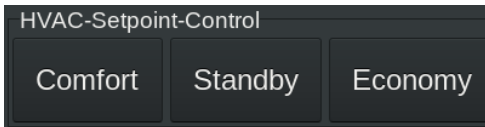
Info

Element to change up to four setpoints. By pressing the setpoint button the associated value can be changed in the setpoint menu. To send the new value the button on the left in the setpoint menu has to be pressed.

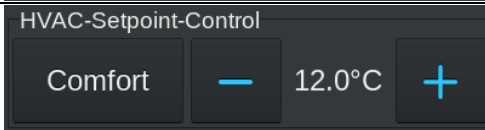
Example

	HVAC-Setpoint-Control
	HVAC-Setpoint-Control;TO=5;DC=2; MIN=0:-5:18:15;MAX=0:17:20:30;T=0:15:18:22;INTERN;STEP=1.5
	Setpoint menu.
	HVAC-Setpoint-Control;TO=5;DC=1; MASK=1010; MIN=6:0:18:0;MAX=8:0:20:0; T=7:0:18:0;SENDONTO;TO=10
	HVAC-Setpoint-Control;MASK=0001;NOBG;TC=green;ICO=HC_b_on
	Setpoint menu.

e2 / subject to change



HVAC-Setpoint-Control;TEXT;MASK=0001



Setpoint menu.

4.11.2. HVAC-Mode-Control

Element Type Nr. 81

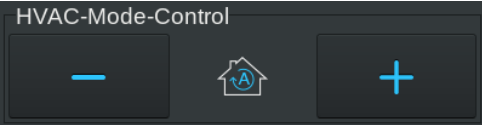
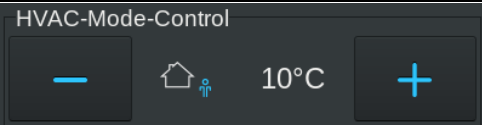
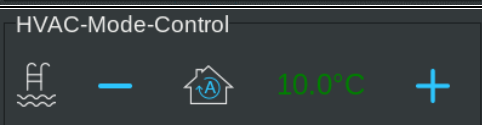
ETS Group Objects		
A Output, HVAC-Mode	1 Byte	HVAC Mode DPT20.102.
B Input, Temperature Feedback	2 Byte	Temperature feedback, displayed between buttons.
N/A		
N/A		
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
TC =red		Text color. HTML color name (red) or HEX color codes (#FF0000).
DC =2		Number of decimal places displayed.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
INTERN		Element is connected directly to internal RTC (Room Temperature Controller), without bus communication. Group Objects can stay disconnected. Protection setpoint is removed.
TSET		If set, sends 1 (increment, + button) or 0 (decrement, - button) on "A Output, HVAC-Mode". Removes the HVAC mode icon.
MASK =10001		Mask out certain modes. MASK=Protection Night Standby Comfort Automatic (0:displayed,1:removed)
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element with icons, to switch between 1 byte HVAC Mode DPT20.102.

Values sent to group object "B Input, Temperature Feedback" are displayed between the buttons.

Example

	HVAC-Mode-Control
	HVAC-Mode-Control; INTERN; MASK=10001; DC=0
	TSET; TSET
	HVAC-Mode-Control; NOBG; TC=green; ICO=POOL

e2 / subject to change

4.11.3. HVAC-Mode-Control-Text

Element Type Nr. 82

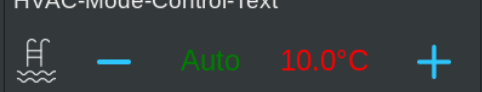
ETS Group Objects		
A Output, HVAC-Mode	1 Byte	HVAC Mode DPT20.102.
B Input, Temperature Feedback	2 Byte	Temperature feedback, displayed between buttons.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
DC	=2	Number of decimal places displayed.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
INTERN		Element is connected directly to internal RTC (Room Temperature Controller), without bus communication. Group Objects can stay disconnected. Protection setpoint is removed.
TSET		If set, sends 1 (increment, + button) or 0 (decrement, - button) on "A Output, HVAC-Mode". Removes the HVAC mode icon.
MASK	=10001	Mask out certain modes. MASK=Protection Night Standby Comfort Automatic (0:displayed,1:removed)
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

Element with text, to switch between 1 byte HVAC Mode DPT20.102.

Values sent to group object "B Input, Temperature Feedback" are displayed between the buttons.

Example

	HVAC-Mode-Control-Text
	HVAC-Mode-Control-Text; INTERN; MASK=10001; DC=0
	TSET; TSET
	HVAC-Mode-Control-Text; NOBG; BCOL=green; ICO=POOL; LCOL=red

e2 / subject to change

4.11.4. HVAC-Fan-Control

Element Type Nr. 83

ETS Group Objects		
A IO, Switch Manual/Auto	1 Bit	Fan control auto or manual.
B IO, Fan Speed	1 Byte	Output fan speed 0..3 or 0..100%.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
INTERN		Element is connected directly to internal RTC (Room Temperature Controller), without bus communication. Group Objects can stay disconnected. Protection setpoint is removed.
FANSTAGE		Output 0, 1, 2, 3 instead of 0%, 33%, 66%, 100%.

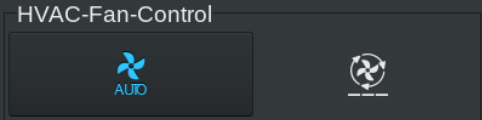
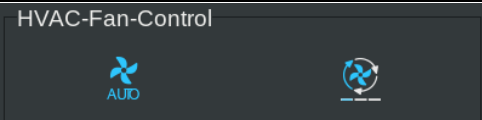
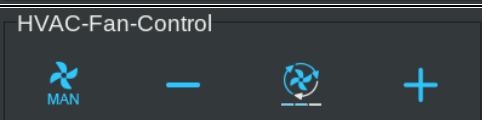
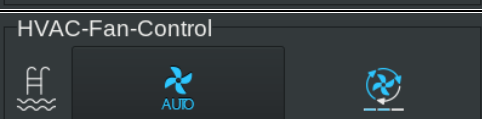
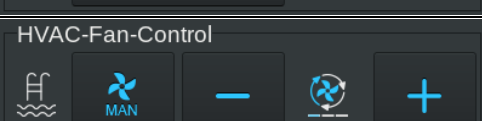
Info

HVAC fan control element with auto/manual switch.

Auto Mode: Fan speed is displayed.

Manual Mode: Fan speed can be set between 0..3 or 0..100%.

Example

	HVAC-Fan-Control
	HVAC-Fan-Control;NOBG;FANSTAGE
	Fan menu.
	HVAC-Fan-Control;ICO=POOL;
	Fan menu.

e2 / subject to change

4.12. Timer

Image	Nr. Data type	Element Type Format
  	60 2x 1 Bit	Alarmclock W, ICO, NOBG, RDRQ, ALTO, SILENT, PIN, PPIN
  	61 2x 1 Bit	Alarmtimer W, ICO, NOBG, RDRQ, ALTO, SILENT, PIN, PPIN
  	59 2x 1 Bit	Astroclock B0, B1, L0, L1, ICO, TC, LCOL, BCOL, INV, PIN, PPIN
  	62 2x 1 Bit	1-Bit-Timer-Profile W, L0, L1, IMG, ICO, TC, PF, NOBG, RDRQ, OVRTO, PIN, PPIN
  	63 1x 1 Bit 1x 1 Byte	1-Byte-Timer-Profile 0..100% W, IMG, ICO, TC, PF, STEP, MIN, MAX, NOBG, RDRQ, OVRTO, PIN, PPIN
  	64 1x 1 Bit 1x 1 Byte	1-Byte-Timer-Profile 0..255 W, IMG, ICO, TC, PF, STEP, MIN, MAX, NOBG, RDRQ, OVRTO, PIN, PPIN
  	65 1x 1 Bit 1x 1 Byte	1-Byte-Timer-Profile HVAC W, IMG, ICO, NOBG, RDRQ, OVRTO, INTERN, MASK, PIN, PPIN
  	66 1x 1 Bit 1x 2 Byte	2-Byte-Float-Timer-Profile W, IMG, ICO, TC, PF, DC, STEP, MIN, MAX, NOBG, RDRQ, OVRTO, PIN, PPIN

4.12.1. Alarmclock

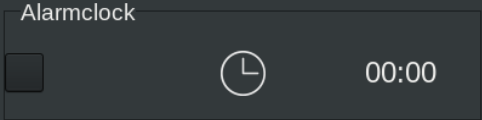
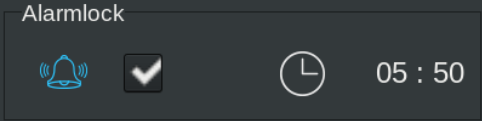
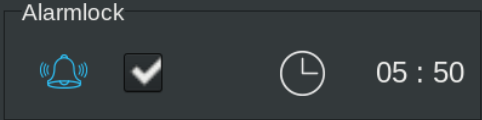
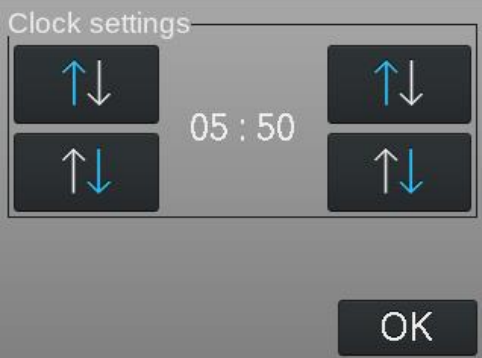
Element Type Nr. 60

ETS Group Objects		
A Output, Timer	1 bit	Timer Alarm output.
B IO, Timer Enable	1 bit	Timer enable/start.
N/A		
N/A		
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
ALTO =30		Time until the acoustic alarm signal is switched off, in seconds.
SILENT		Silent alarm.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN =4242		Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

Info

Alarm clock element to trigger an acoustic alarm signal and send a value at a certain time.
The submenu to set the alarm time is opened by pressing the time value.

Example

	Alarmclock
	Alarmclock; ICO=RING; ALTO=5
	Alarmclock; ICO=RING; SILENT
	The submenu is opened by pressing the time value. Format (hh:mm)

e2 / subject to change

4.12.2. Alarmtimer

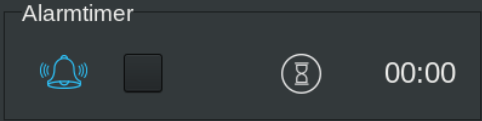
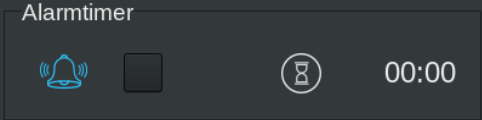
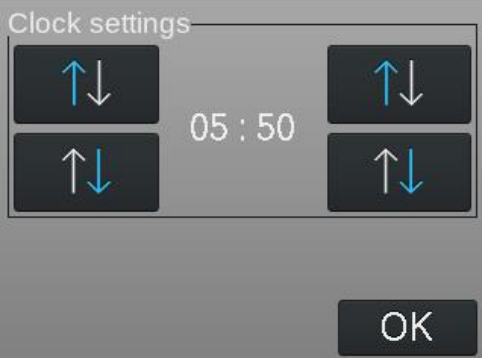
Element Type Nr. 61

ETS Group Objects		
A Output, Timer	1 bit	Timer Alarm output.
B IO, Timer Enable	1 bit	Timer enable/start.
N/A		
N/A		
Format		
W =200		Tries to in-/de-crease the width of the label to x pixel (or %).
ICO =DOOR_b_on		Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
ALTO =30		Time until the acoustic alarm signal is switched off, in seconds.
SILENT		Silent alarm.
PIN =2342		Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN =4242		Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

Info

Alarm timer element to trigger an acoustic alarm signal and send a value after a certain time.
The submenu to set the alarm time is opened by pressing the time value.

Example

	Alarmtimer
	Alarmtimer; ICO=RING; ALTO=5
	Alarmtimer; ICO=RING; SILENT
	The submenu is opened by pressing the time value. Format (mm:ss)

e2 / subject to change

4.12.3. Astroclock

Element Type Nr. 59

ETS Group Objects		
A Output, Timer	1 bit	Timer Alarm output.
B IO, Timer Enable	1 bit	Timer enable/start.
N/A		
N/A		
Format		
B0	=Off	Text on the button for value 0.
B1	=On	Text on the button for value 1.
L0	=Off	Text on the label for value 0.
L1	=On	Text on the label for value 1.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
LCOL	=#FF0000	Label text color. HTML color name (red) or HEX color codes (#FF0000).
BCOL	=green	Button text color. HTML color name (red) or HEX color codes (#FF0000).
INV		Invert the output value. The default value between sunrise and sunset (day) is 0.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN	=4242	Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

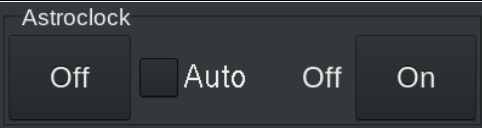
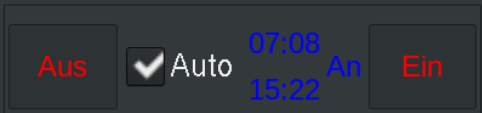
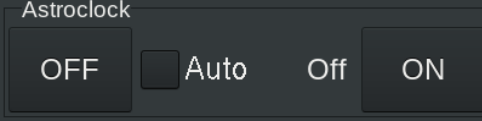
Info

This element sends a 1 at sunset and a 0 at sunrise on group object "A Output, Timer". This is done by providing geographic coordinates and the correct system time.

Standard values for sunset height are:

- 0° sun-rise/set
- 6° civil dusk/dawn
- 12° nautical dusk/dawn
- 18° astronomical dusk/dawn

Example

	Astroclock
	;BCOL=red;LCOL=blue
	Astroclock;L0=Off;L1=Alarm;B0=OFF;B1=ON
	Submenu. Opened by pressing the time value.

e2 / subject to change

4.12.4. 1-Bit-Timer-Profile

Element Type Nr. 62

ETS Group Objects		
A Output, Profile	1 bit	Weekly timer value output.
B IO, Profile Enable	1 bit	Weekly timer enable.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
L0	=Off	Text on the label for value 0.
L1	=On	Text on the label for value 1.
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
OVRTO	=2	Time period in minutes after user overwrite until return to scheduled values.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN	=4242	Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

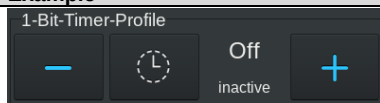
Info

Element to send values, according to an end user defined schedule.

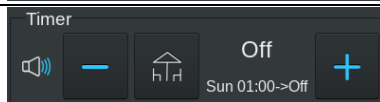
The weekly timer can be enabled/disabled by pressing on the value between the buttons or via group object "B IO, Profile Enable". The timetable is opened by pressing the icon.

It is always possible to change the value and overwrite the timetable by pressing the outer most buttons. After the value was change manually and if the weekly timer is enabled, the manual value is overwritten after OVRTO with the scheduled value.

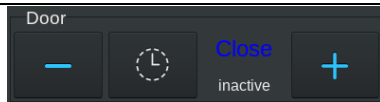
Example



1-Bit-Timer-Profile



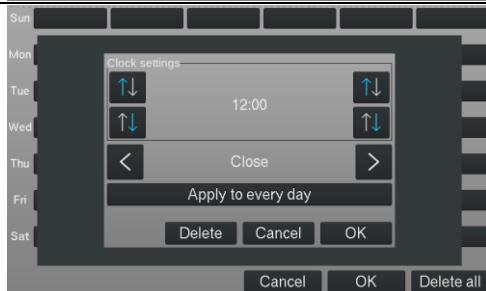
Timer; ICO=SOUND_up; IMG=TERRACE



Door; L0=Close; L1=Open; TC=blue



Time schedule menu.



Time schedule entry menu.

e2 / subject to change

4.12.5. 1-Byte-Timer-Profile 0..100%

Element Type Nr. 63

ETS Group Objects		
A Output, Profile	1 Byte	Weekly timer value output.
B IO, Profile Enable	1 bit	Weekly timer enable.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
STEP	=1.5	Value change per step/button press.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
OVRTO	=2	Time period in minutes after user overwrite until return to scheduled values.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN	=4242	Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

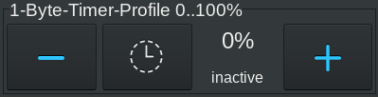
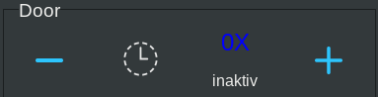
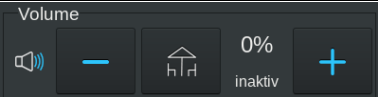
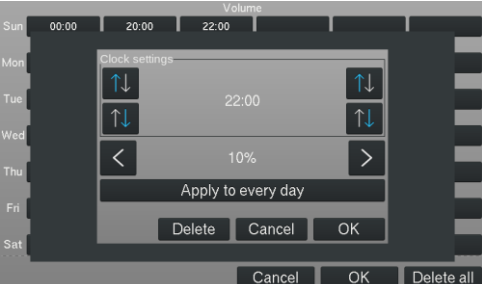
Info

Element to send values, according to an end user defined schedule.

The weekly timer can be enabled/disabled by pressing on the value between the buttons or via group object "B IO, Profile Enable". The timetable is opened by pressing the icon.

It is always possible to change the value and overwrite the timetable by pressing the outer most buttons. After the value was change manually and if the weekly timer is enabled, the manual value is overwritten after OVRTO with the scheduled value.

Example

	1-Byte-Timer-Profile 0..100%
	Door; TC=blue; STEP=5; NOBG; PF=X
	Volume; ICO=SOUND_up; IMG=TERRACE; MIN=0; MAX=50;
	Time schedule menu.
	Time schedule entry menu.

e2 / subject to change

4.12.6. 1-Byte-Timer-Profile 0..255

Element Type Nr. 64

ETS Group Objects		
A Output, Profile	1 Byte	Weekly timer value output.
B IO, Profile Enable	1 bit	Weekly timer enable.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
STEP	=1.5	Value change per step/button press.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
OVRTO	=2	Time period in minutes after user overwrite until return to scheduled values.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN	=4242	Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

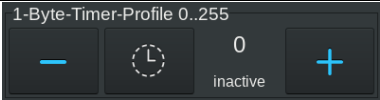
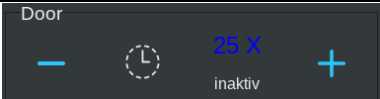
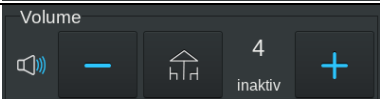
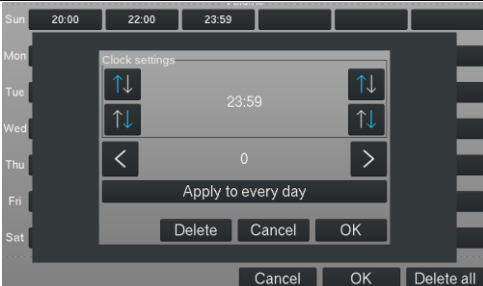
Info

Element to send values, according to an end user defined schedule.

The weekly timer can be enabled/disabled by pressing on the value between the buttons or via group object "B IO, Profile Enable". The timetable is opened by pressing the icon.

It is always possible to change the value and overwrite the timetable by pressing the outer most buttons. After the value was change manually and if the weekly timer is enabled, the manual value is overwritten after OVRTO with the scheduled value.

Example

	1-Byte-Timer-Profile 0..255
	Door;TC=blue;STEP=5;NOBG;PF= X
	Volume;ICO=SOUND_up;IMG=TERRACE;MIN=0;MAX=11;
	Time schedule menu.
	Time schedule entry menu.

e2 / subject to change

4.12.7. 1-Byte-Timer-Profile HVAC

Element Type Nr. 65

ETS Group Objects		
A Output, Profile	1 Byte	Weekly timer value output.
B IO, Profile Enable	1 bit	Weekly timer enable.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
OVRTO	=2	Time period in minutes after user overwrite until return to scheduled values.
INTERN		Element is connected directly to internal RTC (Room Temperature Controller), without bus communication. Group Objects can stay disconnected. Protection setpoint is removed.
MASK	=10001	Mask out certain modes. MASK=Protection Night Standby Comfort Automatic (0:displayed,1:removed)
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN	=4242	Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

Info

Element to send values, according to an end user defined schedule.

The weekly timer can be enabled/disabled by pressing on the value between the buttons or via group object "B IO, Profile Enable". The timetable is opened by pressing the icon.

It is always possible to change the value and overwrite the timetable by pressing the outer most buttons. After the value was change manually and if the weekly timer is enabled, the manual value is overwritten after OVRTO with the scheduled value.

Example

	1-Byte-Timer-Profile HVAC
	Test; TC=blue; NOBG; OVRTO=15; MASK=11100
	Terrace; ICO=TERRACE; IMG=TERRACE; INTERN
	Time schedule menu.
	Time schedule entry menu.

e2 / subject to change

4.12.8. 2-Byte-Float-Timer-Profile

Element Type Nr. 66

ETS Group Objects		
A Output, Profile	2 Byte	Weekly timer value output.
B IO, Profile Enable	1 bit	Weekly timer enable.
N/A		
N/A		
Format		
W	=200	Tries to in-/de-crease the width of the label to x pixel (or %).
IMG	=TERRACE	Icon displayed on the button. Icon name without file extension.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
TC	=red	Text color. HTML color name (red) or HEX color codes (#FF0000).
PF	= °C	Unit displayed after the value.
DC	=2	Number of decimal places displayed.
STEP	=1.5	Value change per step/button press.
MIN	=7	Upper value limit.
MAX	=10	Lower value limit.
NOBG		Display button content directly on the background, without the outline. The touch sensitive areas stay the same.
RDRQ		Send a read request for the group object/s on startup.
OVRTO	=2	Time period in minutes after user overwrite until return to scheduled values.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)
PPIN	=4242	Define a local pin for the element's secondary function. Overwrites PIN parameter. Only works if "Use Element PIN" is set to yes. (PPIN=1 is not supported, includes e.g., 0001)

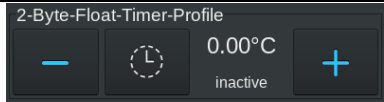
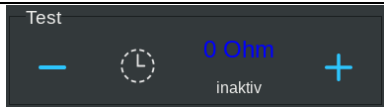
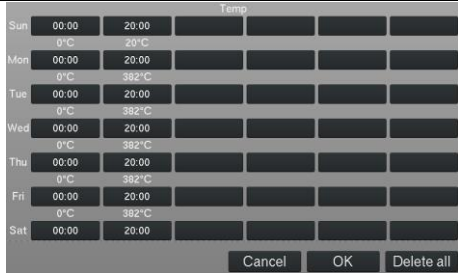
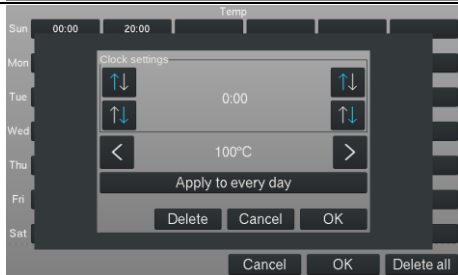
Info

Element to send values, according to an end user defined schedule.

The weekly timer can be enabled/disabled by pressing on the value between the buttons or via group object "B IO, Profile Enable". The timetable is opened by pressing the icon.

It is always possible to change the value and overwrite the timetable by pressing the outer most buttons. After the value was change manually and if the weekly timer is enabled, the manual value is overwritten after OVRTO with the scheduled value.

Example

	2-Byte-Float-Timer-Profile
	Test; TC=blue; STEP=5; NOBG; PF= Ohm; MIN=0; MAX=100; DC=0
	Volume; ICO=SOUND_up; IMG=TERRACE; MIN=0; MAX=50;
	Time schedule menu.
	Time schedule entry menu.

e2 / subject to change

4.13. Datalogging

Image	Nr.	Element Type
	Data type	Format
Telegram	95	Telegram
Telegram	N/A	LABEL, ICO, PIN
Line-Graph	96	Line-Graph
Line-Graph	N/A	LABEL, ICO, DGRM, PIN
Bar-Graph	97	Bar-Graph
Bar-Graph	N/A	LABEL, ICO, DGRM, PIN

4.13.1. Telegrams

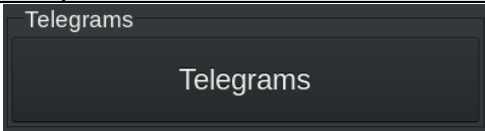
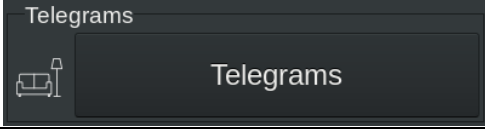
Element Type Nr. 95

ETS Group Objects		
N/A		
N/A		
N/A		
N/A		

Format		
LABEL	=Test	Text on the button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info
For this Element Type a SD-Card (FAT32) is required. After inserting the card, it has to be mounted and datalogging has to be enabled in the system settings under System & SD-Card.

This element displays logged telegrams in a table format.

Example	
	Telegrams
	Telegrams; ICO=LIVING
	Submenu.

4.13.2. Line-Graph

Element Type Nr. 96

ETS Group Objects		
	N/A	
	N/A	
	N/A	
	N/A	
Format		
LABEL	=Test	Text on the button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
DGRM	=a/b[/c],t,n,p,c :...	Select specific group addresses and define appearance on the graph. Details see Info box.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

For this Element Type a SD-Card (FAT32) is required. After inserting the card, it has to be mounted and datalogging has to be enabled in the system settings under System & SD-Card.

This element displays up to three curves on a line graph.
The button for this element is only displayed if a valid DGRM is defined.

DGRM=a/b[/c],t,n,p,c: ...

a/b[/c]: Group address

t: Main number of the data point type (DPT). E.g., for DPT9.001 Temperature it would be 9

n: Displayed name

p: Postfix/unit displayed with the value.

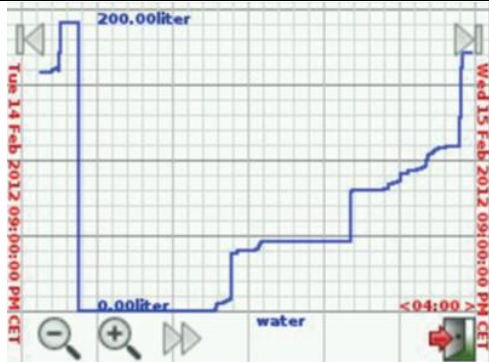
c: Color

Only the group address and the type are mandatory, the rest can be omitted.

Example: DGRM=1/2/2,12:1/2/3,12:1/2/4,12

Example

Line-Graph 	Line-Graph
Line-Graph 	Line-Graph; LABEL=Line-Graph; DGRM=6/4/3,14,water,liter,blue;



Submenu.

4.13.3. Bar-Graph

Element Type Nr. 97

ETS Group Objects		
N/A		
N/A		
N/A		
N/A		
Format		
LABEL	=Test	Text on the button.
ICO	=DOOR_b_on	Icon displayed on the left side of the element. Icon file name without file extension.
DGRM	=a/b[/c],t,n,p,c :...	Select specific group addresses and define appearance on the graph. Details see Info box.
PIN	=2342	Define a local pin for the element's primary (and secondary) function. Only works if "Use Element PIN" is set to yes. (PIN=1 is not supported, includes e.g., 0001)

Info

For this Element Type a SD-Card (FAT32) is required. After inserting the card, it has to be mounted and datalogging has to be enabled in the system settings under System & SD-Card.

This element displays daily bars for up to three different group addresses on a bar graph. The button for this element is only displayed if a valid DGRM is defined.

DGRM=a/b[/c],t,n,p,c: ...

a/b[/c]: Group address

t: Main number of the data point type (DPT). E.g., for DPT9.001 Temperature it would be 9

n: Displayed name

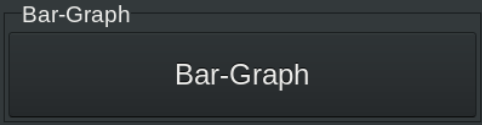
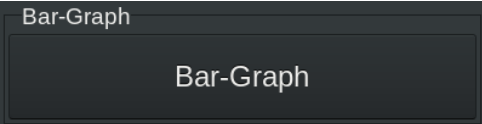
p: Postfix/unit displayed with the value.

c: Color

Only the group address and the type are mandatory, the rest can be omitted.

Example: DGRM=1/2/2,12:1/2/3,12:1/2/4,12

Example

	Bar-Graph
	Bar-Graph;LABEL=Bar-Graph;DGRM=1/0/0,14,Power,kWh,green:1/0/1,14,Water,L,red:1/0/2,14,1/0/2,blue;



Submenu.

5. Alarm Page

The elements on the Alarm Page can be used with the parameters AL (Alarm lower limit) and AH (Alarm high limit) in the [Name \[;Format \]](#) field. If the value crosses a limit the alarm page is displayed and acoustic signal is emitted. There are settings available in the [Page 6 Name \[;Format \] \(Alarm\)](#) field and in the device system settings dialog, e.g. volume, signal length, silent,

5.1. Important

The alarm is only triggered if the value crosses the limit.

Example:

AL=100, previous value was 200, new value sent is 10 > alarm triggered > alarm acknowledged > new value 50 > no alarm triggered.

5.2. How to

1. ETS Parameters set [Page scheme](#) to "5 Pages / 1 Alarm Page".
2. If necessary add parameter to the [Page 6 Name \[;Format \] \(Alarm\)](#) ETS parameter field.
3. Add elements to the alarm page.
 - a. In the ETS parameter under the "Alarm Page" ribbon open Element X:.
 - b. Add an element that supports the AL and AH parameter (see [Element Type](#)).
 - c. Define AL and/or AH in [Name \[;Format \]](#).
4. Connect the group objects of the elements on the alarm page.
5. Make the ETS download.
6. Send values to the group objects to trigger the alarm.

5.3. Example

There are door contact switches and if one is opened an alarm should be triggered on the device.

1.8.2 TouchIT AC4 > Alarm Page > Element 1: Alarm main door

+ Page 1	Descriptor	Alarm main door
+ Page 2	Object Type	1 Bit
+ Page 3	Element Type	1-bit-ON/OFF-Toggle-Text with Value
+ Page 4	Element Size	Normal
+ Page 5	Interactive	☒ No ☐ Yes
+ Page 5	Use Element PIN	☒ No ☐ Yes
- Alarm Page	Align steps	☐ No ☒ Yes
Element 1: Alarm main door	Expand horizontal	☐ No ☒ Yes
Element 2:	Expand vertical	☒ No ☐ Yes
Element 3: Alarm garage door	Name [;Format]	Main door;AL=1;L0=Open;L1= ;TC=red
Element 4:		
Element 5: Alarm other door		
Element 6:		

Settings for one element on the alarm page. The other elements are set up in the same way.

Name [;Format]: Main door;AL=1;L0=Open;L1= ;TC=red

Alarm Page interface showing:

- Main door: Open (in red text)
- Garage door
- Other door

6. System Settings

To access the system settings on devices with the default layout:

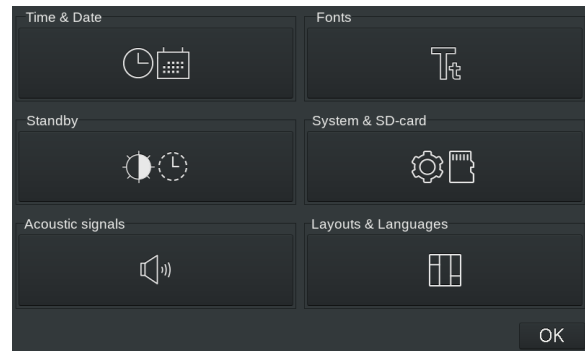
Others:

Press the wrench and gear icon.

AC4:

On the menu page or on the first page, swipe right with two fingers.

On custom layouts the system settings button is user defined.

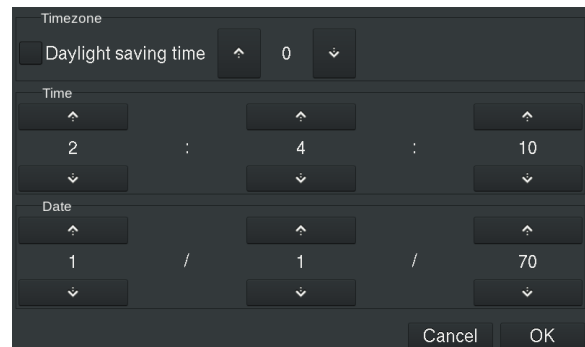


6.1. Time & Date

Enable daylight saving.

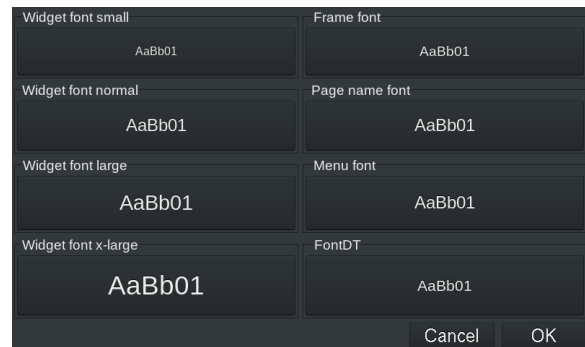
Set time zone.

Set system time and date manually. The time and date can also be set by group object 1 and 2.



6.2. Fonts

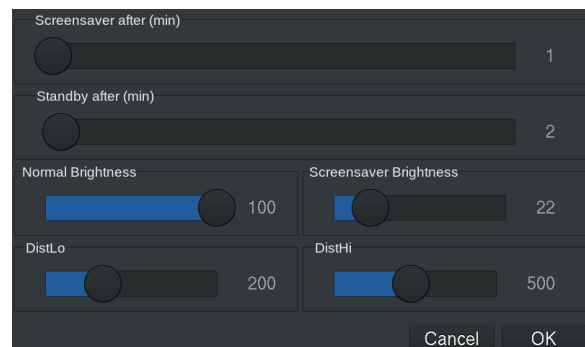
Adjust font sizes and types.



6.3. Standby

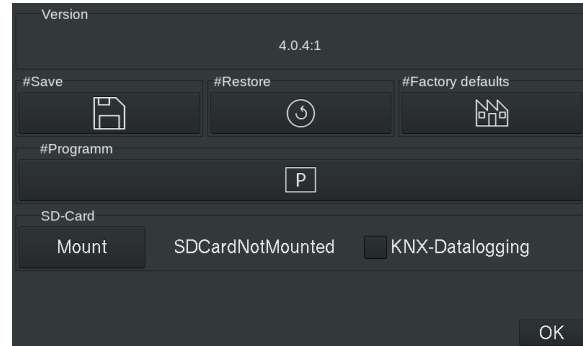
Timeout settings for screensaver and standby. If either is set to 0 the function is disabled. E.g. if "Screensaver after (min)" is disabled the device goes into standby mode after "Standby after (min)".

Screen brightness settings.



6.4. System & SD-card

Version	Firmware Version
Save	Save the system settings
Restore	Restore the saved system settings
Factory defaults	Reset the system settings to factory default
Program	KNX download button
SD Card Mount	Manual mount and unmount of FAT32 formatted SD Card. After the first manual mount the card is mounted automatically on boot.
KNX-Datalogging	If enabled, logs all the traffic on all connected group addresses to the SD Card. Starts automatically on boot if enabled once.



6.5. Acoustic signals

Settings for the acoustic signal:

- Volume
- Frequency
- Signal duration on touch
- Alarm Volume



6.6. Layouts & Languages

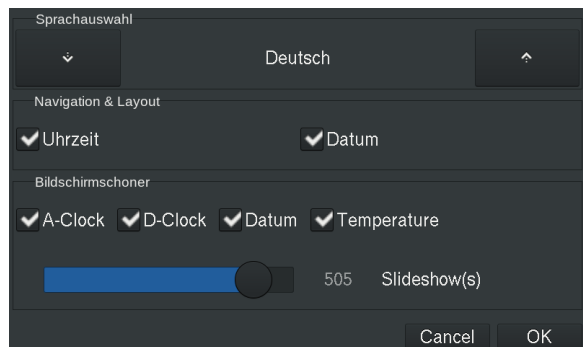
Select language. For further information see [Translation / Localization](#).

If one of the standard layouts is used, then it is possible to choose if time and date is displayed in the top navigation bar.

Screensaver:

Possible overly elements displayed in screensaver mode:

A-Clock	Analog Clock
D-Clock	Digital Clock
Date	Date
Temperature	Temperature

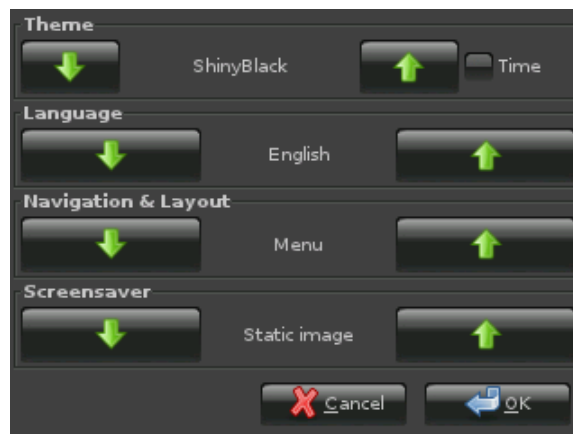


Slideshow (s) defines the interval between background images displayed in screensaver mode in seconds.

More details for user defined screensavers see [Screensaver](#).

AC4: Displays a random static image from the uploaded slideshow files if set to 0.

On older devices it is also possible to choose from different themes and navigation menus directly on the device. See images below.



Theme



Navigation & Layout



7. Screensaver

There are settings for the screensaver in the device system settings ([Layouts & Languages](#)).

7.1. Default



Slideshow blue01..04.png

7.2. ETS Parameter Settings

The Screensaver can be configured using the ETS Parameters fields [Global format identifiers](#) or [Additional identifiers](#). There has to be a semicolon (;) before the first parameter.

Everything defined in the ETS is overwriting the system settings on the device, e.g., it is not possible to enable an analog clock in the system settings on the device, if it is disabled in the ETS Parameter.

7.2.1. Parameter

Each of the following parameters can only be used once. E.G., it is only possible to show one additional value with SCROBJ.

Analog Clock

SCRACLK	=x,y,w,style	Example= 20,20,180,radium
	x	x coordinate. Screen top left to element top left. [pixel]
	y	y coordinate. Screen top left to element top left. [pixel]
	w	Element width [pixel]
	style	Available styles: antique, default, fdo, funky, gremlin, impulse, radium, silvia, simple, tango, zen
	=N	Deactivate element

Digital Clock

SCRDCLK	=x,y,w,color	Example=5,80,310,lightgrey
	x	x coordinate. Screen top left to element top left. [pixel]
	y	y coordinate. Screen top left to element top left. [pixel]
	w	Element width [pixel]
	color	HTML color name (red) or HEX color codes (#FF0000)
	=N	Deactivate element

Date

SCRDATE	=x,y,w,color	Example= 5,200,220,lightgrey
	x	x coordinate. Screen top left to element top left. [pixel]
	y	y coordinate. Screen top left to element top left. [pixel]
	w	Element width [pixel]
	color	HTML color name (red) or HEX color codes (#FF0000)
	=N	Deactivate element

Temperature

SCRTEMP	=x,y,w,d,color	Example= 250,200,70,2,lightgrey
	x	x coordinate. Screen top left to element top left. [pixel]
	y	y coordinate. Screen top left to element top left. [pixel]
	w	Element width [pixel]
	d	Displayed decimal places
	color	HTML color name (red) or HEX color codes (#FF0000)
	=N	Deactivate element

Background Color

SCRBG	=color	HTML color name (red) or HEX color codes (#FF0000)
-------	--------	--

Text Color

Used for all screensaver items, unless a color was already specified for item itself.

SCRTEXT	=color	HTML color name (red) or HEX color codes (#FF0000)
---------	--------	--

Text Background Color

SCRTXTBG = color

HTML color name (red) or HEX color codes (#FF0000)

Group Object Value

SCROBJ =obj,x,y,w,
digits,postfix,color

Example=250,200,70,2,lightgrey

Obj	KNX group object number
x	x coordinate. Screen top left to element top left. [pixel]
y	y coordinate. Screen top left to element top left. [pixel]
w	Element width [pixel]
digits	Displayed decimal places
postfix	Text displayed behind value (e.g. units °C)
color	HTML color name (red) or HEX color codes (#FF0000)

Slideshow interval

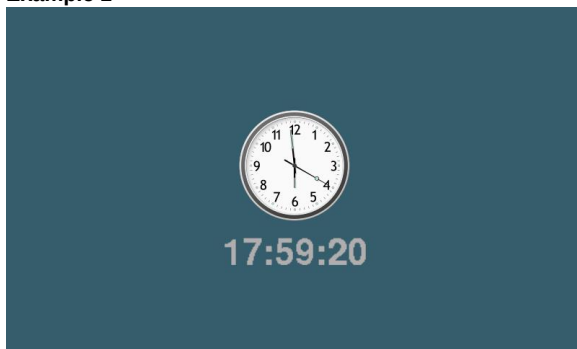
SLIDETIME = time

Defines the interval between background images displayed in screensaver mode in seconds. If set to 0 a random static image is displayed.

7.2.2. Examples

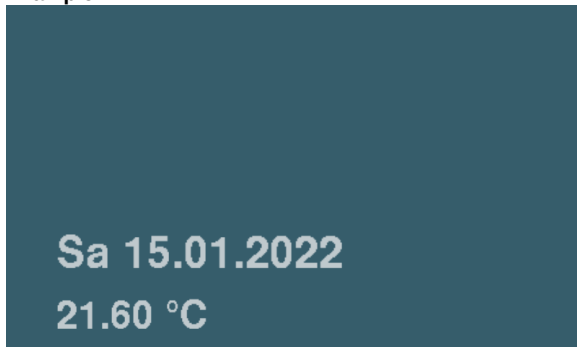
The strings below the examples can be inserted in the [Global format identifiers](#) or [Additional identifiers](#) ETS parameter fields.

Example 1



;SCRBG=#365D6B;SCRCLK=310,130,180;SCRDCLK=300,315,180,#B1AEAF;SCRDATE=N;SCRTEMP=N

Example 2



SCRBG=#365D6B;SCRCLK=N;SCRDCLK=N;SCRDATE=70,312,417,#BFC9CD;SCRTEMP=70,402,195,2,#BFC9CD

Example 3



;SCROBJ=75,367,222,400,0,ppm BOARDROOM,#E6F8CE;SCRDATE=N;SCRTEMP=N;SCRCLK=N;SCRDCLK=N;

e2 / subject to change

7.2.3. Temperature (SCRTEMP)

The temperature displayed by SCRTEMP is the same temperature the **Other** docu uses. If the device has an internal sensor, it can be used as source or a value can be provided via the KNX bus. It is also possible to use a weighted mixture of both.

8. Translation / Localization

With user defined language files, it is possible to make the configuration available in different languages for the end user without changing the ETS Parameters for different languages.

8.1. How it works

There are two translation systems on the device:

- User
 - o Files located in /opt/languages/usr
 - o Language selected in the flag menu (How to enable it see: [Display user language chooser](#))
 - o Dynamically updated without reboot
 - o Files can be uploaded with the configurator, see [Languages](#).
 - o Everything can be translated with the user files
- System
 - o Files located in /opt/languages/system
 - o Language selected in the systems settings: [Layouts & Languages](#)
 - o Reboot required for update. If system settings are exited with the OK button, then there is an automatic reboot.

The system first checks the user files for a translation. If it is missing there it checks system files and if it is also missing there it displays the key.

The filename of the user translation file defines the displayed flag (see [Flags](#)) in the language chooser and the #LOCALE variable (see [#LOCALE](#)) in the user file defines e.g., how time and date are displayed.

8.2. Prefix convention

The following prefixes are not necessary, but it is recommended to use them for better readability and clarity.

Prefix	Example	Description
#	#mainmenu	System entry
\$	\$LAMPS	User entry

8.3. Download existing user language files

1. Use the Configurator tool to create a snapshot: [Snapshot](#)
2. Open the downloaded *.tgz file with e.g. winrar
3. The language files are located in /opt/languages/usr

8.4. Create new translation

1. Select a flag (see [Flags](#)) and create a file with the flag name with .txt file extension. E.g., "en.txt".
2. Open the file and insert the recommended default key value pairs (see below).
3. Set the correct value for #LOCALE (see [#LOCALE](#)). E.g., #LOCALE=en_GB.UTF-8.
4. Define your own key value pairs. E.g., \$ALARM=Alarm.
5. Copy the language file for translation. Make adjustments according to point 1 to 3 and translate all values.
6. Upload all created language files with the configurator (see [Languages](#))
7. Enable the user language chooser in the ETS parameter (see [Display user language chooser](#))
8. Use the key words in the ETS parameters. E.g., \$ALARM.
9. Make an ETS download.
10. (If required reboot the Device.)

8.4.1. Recommended default key value pairs

This key value pairs translate some default text and it is recommended to add them to the user translation files.

```

Loff=OFF
Lon=ON
Bon=ON
Boff=OFF
menu=MENU
#mainmenu=Main menu
Bup=UP
Bdown=DOWN
  
```

8.4.2. #LOCALE

Language name	#LOCALE	Language name	#LOCALE
Afrikaans	af_ZA.UTF-8	Japanese	ja_JP.UTF-8
Albanian	sq_AL.UTF-8	Kannada	kn_IN.UTF-8
Arabic	ar_SA.UTF-8	Khmer	km_KH.UTF-8
Basque	eu_ES.UTF-8	Korean	ko_KR.UTF-8
Belarusian	be_BY.UTF-8	Lao	lo_LA.UTF-8
Bosnian	bs_BA.UTF-8	Lithuanian	lt_LT.UTF-8
Bulgarian	bg_BG.UTF-8	Latvian	lat.UTF-8
Catalan	ca_ES.UTF-8	Malayalam	ml_IN.UTF-8
Croatian	hr_HR.UTF-8	Malaysian	ms_MY.UTF-8
Chinese (Simplified)	zh_CN.UTF-8	Maori (Ngai Tahu)	mi_NZ.UTF-8
Chinese (Traditional)	zh_TW.UTF-8	Maori (Waikoto Uni)	mi_NZ.UTF-8
Czech	cs_CZ.UTF-8	Mongolian	mn.UTF-8
Danish	da_DK.UTF-8	Norwegian	no_NO.UTF-8
Dutch	nl_NL.UTF-8	Norwegian (Primary)	no_NO.UTF-8
English	en.UTF-8	Nynorsk	nn_NO.UTF-8
English (US)	en.UTF-8	Polish	pl.UTF-8
Estonian	et_EE.UTF-8	Portuguese	pt_PT.UTF-8
Farsi	fa_IR.UTF-8	Portuguese (Brazil)	pt_BR.UTF-8
Filipino	fil_PH.UTF-8	Romanian	ro_RO.UTF-8
Finnish	fi_FI.UTF-8	Russian	ru_RU.UTF-8
French	fr_FR.UTF-8 or fr_CH.UTF-8 or fr_BE.UTF-8	Samoan	mi_NZ.UTF-8
French (Canada)	fr_CA.UTF-8	Serbian	sr_CS.UTF-8
Gaelic	ga.UTF-8	Slovak	sk_SK.UTF-8
Gallego	gl_ES.UTF-8	Slovenian	sl_SI.UTF-8
Georgian	ka_GE.UTF-8	Somali	so_SO.UTF-8
German	de_DE.UTF-8	Spanish	es_ES.UTF-8
Greek	el_GR.UTF-8	Swedish	sv_SE.UTF-8
Gujarati	gu.UTF-8	Tagalog	tl.UTF-8
Hebrew	he_IL.utf8	Tamil	ta_IN.UTF-8
Hindi	hi_IN.UTF-8	Thai	th_TH.UTF-8
Hungarian	hu.UTF-8	Tongan	mi_NZ.UTF-8'
Icelandic	is_IS.UTF-8	Turkish	tr_TR.UTF-8
Indonesian	id_ID.UTF-8	Ukrainian	uk_UA.UTF-8
Italian	it_IT.UTF-8	Vietnamese	vi_VN.UTF-8

8.4.3. Flags



e2 / subject to change

8.5. Example

Descriptor	Example translation
Object Type	1 Bit
Element Type	1-bit-ON/OFF-Text with Value
Element Size	Normal
Interactive	☐ No ☒ Yes
Use Element PIN	☒ No ☐ Yes
Align steps	☐ No ☒ Yes
Expand horizontal	☐ No ☒ Yes
Expand vertical	☐ No ☒ Yes
Name [;Format]	\$LIGHT;B0=\$B_OFF;B1=\$B_ON;L0=\$L_OFF;L1=\$L_ON

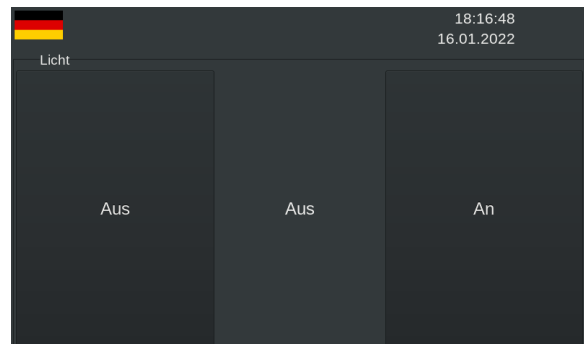
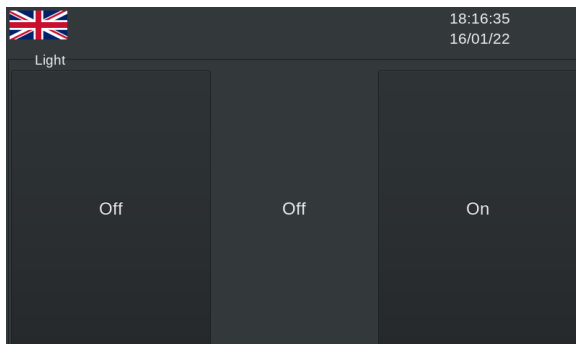
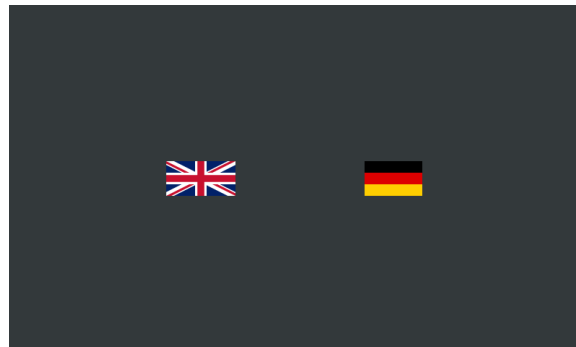
1	2
3	4
5	6
7	8

en.txt

```
#LOCALE=en_GB.UTF-8
Loff=OFF
Lon=ON
Bon=ON
Boff=OFF
menu=MENU
#mainmenu=Main menu
Bup=UP
Bdown=DOWN
$LIGHT=Light
$B_OFF=Off
$B_ON=On
$L_OFF=Off
$L_ON=On
```

de.txt

```
#LOCALE=de_DE.UTF-8
Loff=AUS
Lon=EIN
Bon=EIN
Boff=AUS
menu=MENU
#mainmenu=Hauptmenü
Bup=HOCH
Bdown=RUNTER
$LIGHT=Licht
$B_OFF=Aus
$B_ON=An
$L_OFF=Aus
$L_ON=An
```



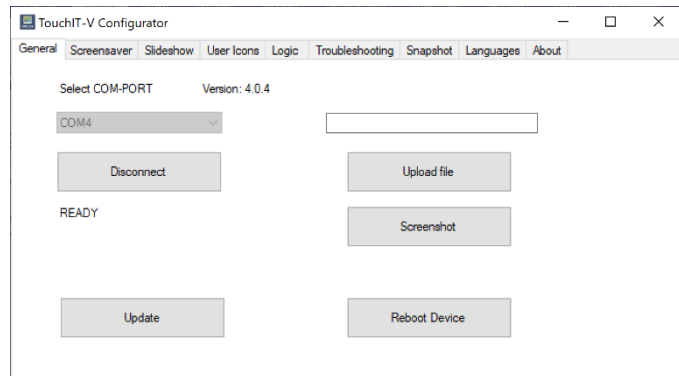
9. Configurator

The configurator software is available on our website.

9.1. General

9.1.1. Establish connection

1. Download the Configurator Software from our website and install it.
2. Connect the TouchIT via USB to your PC.
3. Start the Configurator Software.
4. In the "General" tab below "Select Com-PORT" select the COM port. If there is more than one COMx listed then disconnect the device, check the list, reconnect the device and use the newly added entry.
5. Click "Connect"
6. A successful connection is indicated if the Version number is displayed next to "Select Com-PORT".



9.1.2. Update

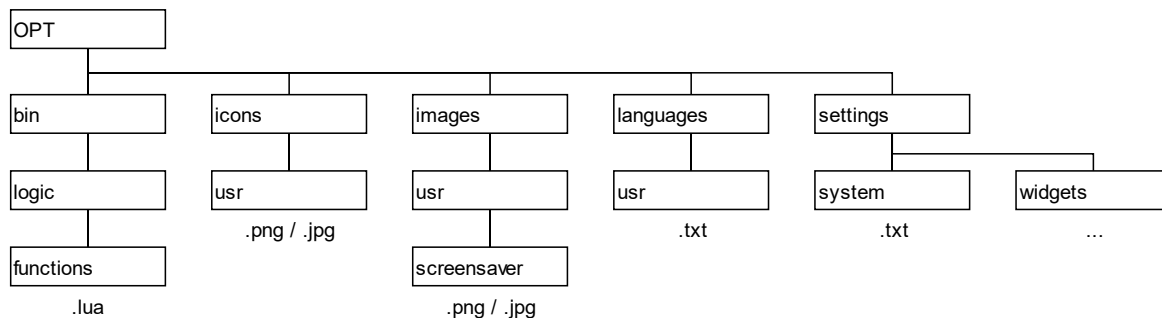
A provided tgz file can be uploaded with the update button.

9.1.3. Upload file

Enter a path to the upload destination in the text field above the "Upload file" button e.g. /opt/languages/usr/, press the "Upload file" button and select the file.

This can be useful in some edge cases, but for most use cases there is a specific tab.

The tree below shows some useful storage locations.



9.1.4. Screenshot

By pressing the "Screenshot" button, the content displayed on the device is captured and saved to the PC.

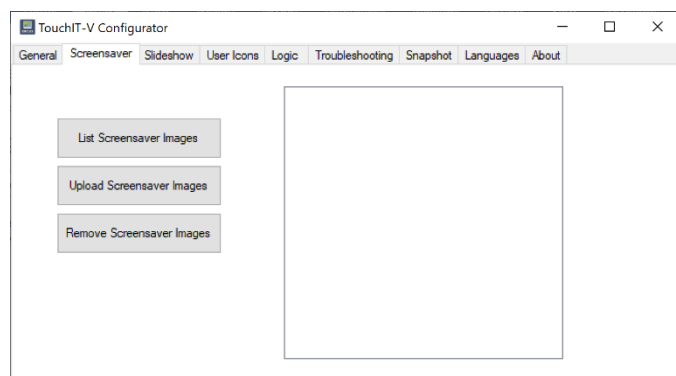
9.1.5. Reboot Device

Press the "Reboot Device" button to reboot the connected device.

9.2. Screensaver

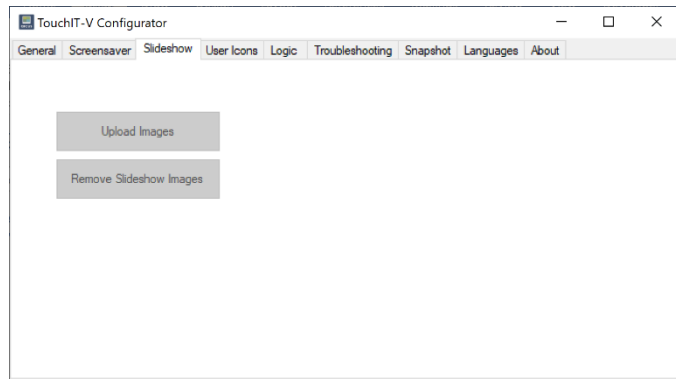
The standard screensaver is replaced if a custom one is uploaded.

The images have to be png files, with a resolution of 320x240 pixels or 800 x 480 pixels, depending on the resolution of the display.



9.3. Slideshow

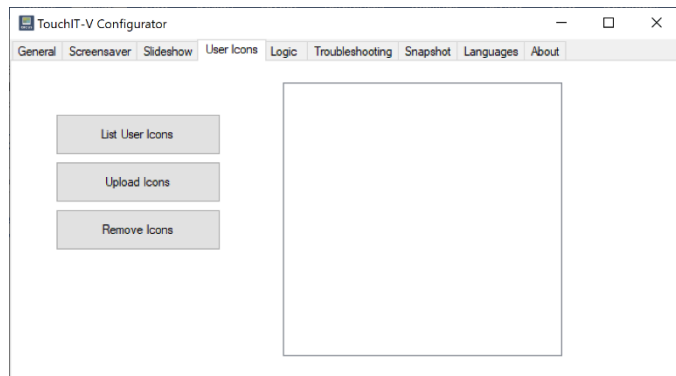
Used on older devices to upload pictures for the screensaver slideshow. The images have to be png files, with a resolution of 320x240 pixels.



9.4. User Icons

Upload custom icons.

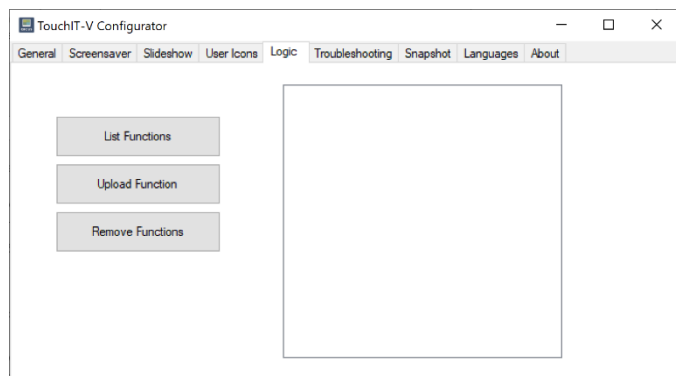
The file format of the icons has to be *.png. The icons are not scaled in size on the device, so they are displayed in the size they are uploaded. The icons also have to be named correctly. For further information see section [Icons](#).



9.5. Logic

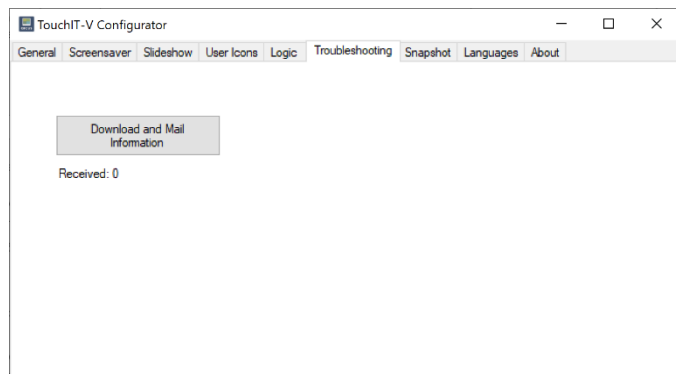
The device supports logic written in LUA. The file extension should be .lua.

For further information see section [Logic](#).



9.6. Troubleshooting

If requested by customer support, parts of the settings can be downloaded with this function.

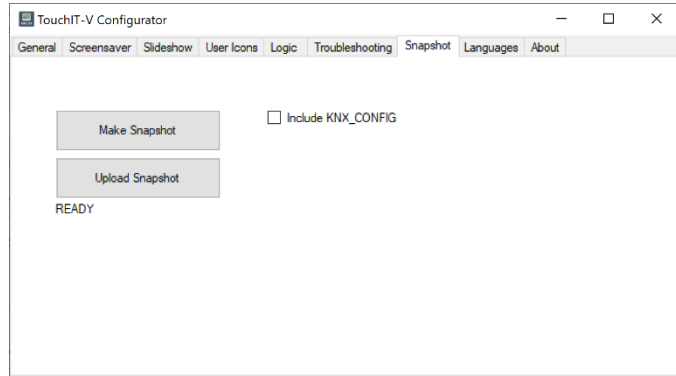


9.7. Snapshot

Create and Restore Snapshots. The Snapshots include user logic, icons, images, ... and are used to back up and restore the device.

If Include KNX_CONFIG is enabled, all the configuration done via ETS is also included in the snapshot.

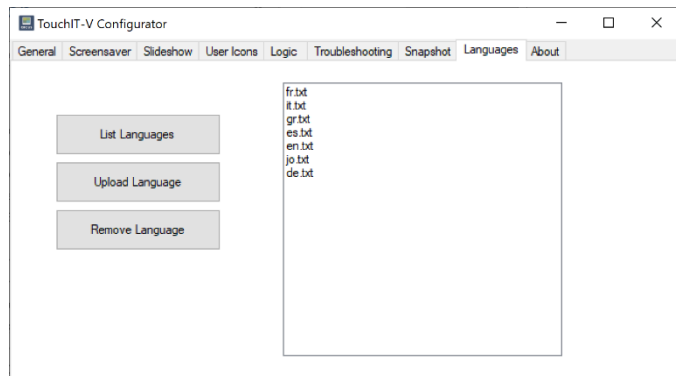
After restoring the snapshot via Upload Snapshot, the device has to be rebooted. E.g., General tab> Reboot Device.



9.8. Languages

Files for translation/localization are uploaded with these functions.

For further information, including the required formatting of the txt file, see section [Translation / Localization](#).



9.9. About

Shows Configurator version.



10. Logic

LUA is used as programming language for the Logic block and there are some custom [Functions](#) available. This logic module can be used for many applications e.g.:

- Manipulation values of group objects and by that to send and receive data to/from connected group addresses.
- Link touch buttons on the display directly to logic functions.
- Jump to pages on the display for custom menu implementations.
- Custom acoustic signals.
- Timer based events.

10.1. How to

1. Upload the logic files with .lua file extension via USB with the [Configurator](#)
2. Enable the logic block in the ETS parameter: [Use logic functions](#)
3. If required enable a Logic scheme in the ETS parameter: [Logic scheme](#)
4. Make the ETS download

10.2. Important

- ETS group objects start from 1, the logic group object count starts at 0. E.g., `knx.get_float(10)` read the value of group object number 11.
- If a new/changed logic file is uploaded a reboot is required. It is also enough to make a partial ETS download.
- Only logic group objects trigger the callback functions `knx_value_changed()` and `knx_value_update()`.
- Values can be written to all group objects of the device.
- It is possible to poll non logic objects.
- If no group address is connected to a group object no data is sent to the bus.
- There has to be a group address connected to the group object so the corresponding internal element updates/displays a value. To reduce buss traffic the communication flag can be disabled.
- DPT9 2 Byte float values are read and written as 2 Byte integers, the values can be converted by using the provided functions `dpt9_to_int` and `int_to_dpt9`.
- The Logic block has to be enabled in the ETS.

10.3. Functions

10.3.1. KNX Functions

```
text1_str, text2_str, ... = knx.get_string(comObjNr1_int, comObjNr2_int, ...)
```

Read one or more 14 Byte String/s from group objects.

`comObjNrX_int` is a KNX group object number.

```
val1_int, val2_int, ... = knx.get_integer(comObjNr1_int, comObjNr2_int, ...)
```

Read one or more 1..4 Byte Integer/s from group objects. Also used for 2 Byte float DPT9, e.g.

```
val_float = knx.dpt9_to_int(knx.get_integer(comObjNr_int))/100.0
```

`comObjNrX_int` is a KNX group object number.

```
val1_float, val2_float, ... = knx.get_float(comObjNr1_int, comObjNr2_int, ...)
```

Read one or more 4 Byte Float/s from group objects.

`comObjNrX_int` is a KNX group object number.

```
knx.set_string(comObjNr_int, text_str)
```

Write one 14 Byte String to a provided group object number.

`comObjNrX_int` is a KNX group object number.

`text_str` is the value to be set.

```
knx.set_integer(comObjNr_int, length_int, value_int)
```

Write one 1 .. 4 Byte Integer with provided length to a provided group object number.

`comObjNrX_int` is a KNX group object number.

`length_int` is the integer length in byte.

`value_int` is the value to be set.

```
knx.set_float(ComObjNr_int, value_float)
```

Write one 4 Byte Float to a provided group object number.

`comObjNrX_int` is a KNX group object number.

`value_float` is the value to be set.

```
value_int = knx.dpt9_to_int(value_int)
```

Converter for reading 2 Byte float DPT9. E.g.: `value_float = knx.dpt9_to_int(knx.get_integer(comObjNr_int)) / 100.0`

```
value_int = knx.int_to_dpt9(value_int)
```

Converter for writing 2 Byte float DPT9. E.g.: `knx.set_integer(comObjNr_int, 2, knx.int_to_dpt9(value_float * 100.0))`

`status_int = knx.tx_idle(comObjNr_int)`
Check if group object has completed the sending process.

10.3.2. System Functions

`sys.timeout(timeout_ms_int [, callbackArgument])`

Initialize timeout callback function. `timeout([callbackArgument])` is called after `timeout_ms_int` milliseconds and the optional callback Argument/s are handed through.

`sys.set_page(pageNr_int)`

Display `pageNr_int`. Wakes up the device if in stand-by.
`pageNr_int`: 1..6

`sys.set_brightness(percent_int)`

Set display brightness 0..100.

`sys.beep(duration_ms_int[, frequency_hz_int [, volume_int]])`

Emit a acoustic signal for `duration_ms_int` with the `frequency_hz_int` and a volume of `volume_int` range 0..15.

`sys.put_setting(name_str, value)`

Create/write a no volatile variable into flash memory.

`name_str` is the variable name

`value` is the value to save

`value = sys.get_setting(name_str)`

Read nonvolatile variable.

`name_str` is the variable name

`value` is the read value

`sys.signal_obj(comObjNr_int)`

Forces an update of displayed elements connected to group object with the number of `comObjNr_int`.

`sys.message(text_str)`

Display a message dialog containing `text_str`. The dialog has to be acknowledged manually by pressing a button.

`sys.settings_dialog(settingsName_str)`

Display a dialog in order to change values in the settings table with the name `settingsName_str`. The argument is the name of the settings table variable as a string.

`sys.read_settings(settingsName_str)`

Read a settings table named `settingsName_str` from nonvolatile flash memory. The argument is the name of the settings table variable as a string.

`sys.write_settings(settingsName_str)`

Write a settings table named `settingsName_str` to nonvolatile flash memory. The argument is the name of the settings table variable as a string.

10.3.3. Callback Functions

`knx_value_changed(comObjNr_int)`

Is called if a KNX value changed, the argument is KNX group object number of the object whose value changed.

`knx_value_update(comObjNr_int)`

Is called if a KNX value updated (same value received again), the argument is KNX group object number of the object whose value updated.

`settings_set(settingsName_str)`

Is called if a settings dialog was closed by pressing the OK button. Can be used to save the settings with `sys.write_settings`. The argument is the name of the settings table variable as a string.

`timeout([callbackArgument])`

Is called after timeout, setup with `sys.timeout`, occurs. The optional callbackArgument is also handed through from `sys.timeout`. If this function returns 0 the loop continues and timeout is called again after the interval originally setup with `sys.timeout`. If it returns 1 the loop stops and timeout is not called again, unless it is set up with `sys.timeout` again.

10.3.4. Logic Settings

The logic settings allow for settings saved in nonvolatile flash memory with a special settings dialog to change settings values. There can be more than one settings table but only the one called "settings" is accessible in device settings under Logic. Other tables with a different name can be displayed by calling `sys.settings_dialog(settingsName_str)`. If the settings are changed and the dialog was closed by pressing OK, then the callback function `settings_set(settingsName_str)` is executed and can be used to save the changed settings to nonvolatile flash with

`sys.write_settings(settingsName_str)`. `sys.read_settings(settingsName_str)` should be executed at

e2 / subject to change

system start to read the a settings table from nonvolatile flash and provide it as global variable with the name "settingsName_str".

Structure

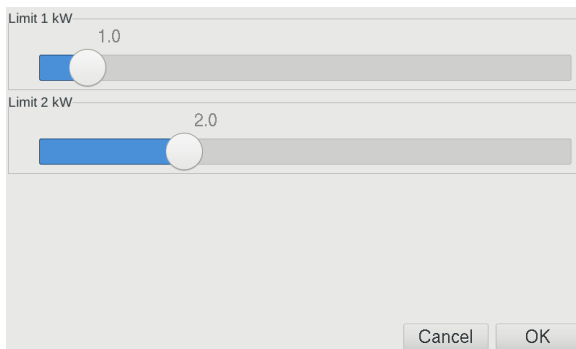
settingsName = { {name, min, max, val, dc}, {name, min, max, val, dc}, ... (up to 8 entries) }
val: initial value
dc: digit count

Example 1

Settings accessible via device system settings under Logic.

```
settings = {
    {name = "Limit 1 kW", min = 0.5, max = 6.0, val = 1.0, dc = 1.0},
    {name = "Limit 2 kW", min = 0.5, max = 6.0, val = 2.5, dc = 1.0},
}
function settings_set(settingsName_str)
    sys.write_settings(settingsName_str)
end
sys.read_settings("settings")

sys.message(settings[1].val)
```



Example 2

```
other_settings = {
    {name = "test 1", min = 0.5, max = 6.0, val = 1.0, dc = 1.0},
    {name = "test 2", min = 0.5, max = 6.0, val = 2.5, dc = 1.0},
}
function settings_set(settingsName_str)
    sys.write_settings(settingsName_str)
end
sys.read_settings("other_settings ")

sys.settings_dialog("other_settings")

sys.message(settings[1].val)
```

10.4. Example

In this example a traffic light switches from green to yellow and red if two corresponding limits are exceeded. The limits can be changed in the settings on the device. This is done for three channels.

There is also the sum of all three values calculated and displayed and a pushbutton switches all lights to red on press and to the original value on release.

10.4.1. Device

00:23:26 01.01.1970		00:24:17 01.01.1970	
Total Power 4.08 kW	Test Test red	Total Power 4.08 kW	Test Test red
Power 1 2.50 kW	(●●●)	Power 1 2.50 kW	(●●●)
Power 2 0.33 kW	(●●●)	Power 2 0.33 kW	(●●●)
Power 3 1.25 kW	(●●●)	Power 3 1.25 kW	(●●●)

Limit 1 kW
1.0

Limit 2 kW
2.0

Cancel OK

10.4.2. Lua Code

The following source code should be saved as electric_power.lua.

```
settings = {
  {name = "Limit 1 kW", min = 0.5, max = 6.0, val = 1.0, dc = 1.0},
  {name = "Limit 2 kW", min = 0.5, max = 6.0, val = 2.5, dc = 1.0},
}

electric_power_1_I_ObjNr = 49 -- 2 Byte float
electric_power_2_I_ObjNr = 50 -- 2 Byte float
electric_power_3_I_ObjNr = 51 -- 2 Byte float

electric_power_sum_O_ObjNr = 62 -- 2 Byte float

level_epower1_O_ObjNr = 74 -- 1 Byte
level_epower2_O_ObjNr = 82 -- 1 Byte
level_epower3_O_ObjNr = 90 -- 1 Byte

lookup_level_ObjNr = {
  [electric_power_1_I_ObjNr] = level_epower1_O_ObjNr,
  [electric_power_2_I_ObjNr] = level_epower2_O_ObjNr,
  [electric_power_3_I_ObjNr] = level_epower3_O_ObjNr
}

function update_integer(objNr ,bytes ,val)
  if knx.get_integer(objNr) ~= val then
    knx.set_integer(objNr,bytes,val)
    sys.signal_obj(objNr)
  end
end

function get_2Byte_float(objNr) -- write KNX dpt9
  return knx.dpt9_to_int(knx.get_integer(objNr))/100.0
end

function set_2Byte_float(objNr, val) -- read KNX dpt9
  i = knx.int_to_dpt9(val*100.0)
  update_integer(objNr, 2, i)
end

function eval_level(power_ObjNr, level_ObjNr)
```

e2 / subject to change

```

power = get_2Byte_float(power_ObjNr)
limit1 = settings[1].val
limit2 = settings[2].val

if power > limit2 then
    level = 2
elseif power > limit1 then
    level = 1
else
    level = 0
end
update_integer(level_ObjNr ,1 ,level)
end

function update_levels()
    for power_ObjNr, level_ObjNr in pairs(lookup_level_ObjNr) do
        eval_level(power_ObjNr, level_ObjNr)
    end
end

function update_power_sum()
    power_sum = 0
    for power_ObjNr, _ in pairs(lookup_level_ObjNr) do
        val = get_2Byte_float(power_ObjNr)
        power_sum = power_sum + val
    end
    set_2Byte_float(electric_power_sum_O_ObjNr, power_sum)
end

function push_button(state)
    if state == 'press' then
        level = 2
        for _, level_ObjNr in pairs(lookup_level_ObjNr) do
            update_integer(level_ObjNr, 1, level)
        end
    elseif state == 'release' then
        update_levels()
    end
end

function settings_set(x)
    sys.write_settings(x)
    update_levels()
end

function knx_value_changed(x)
    changed_objNr = x
    if lookup_level_ObjNr[changed_objNr] ~= nil then -- a electric_power_x value has changed
        eval_level(changed_objNr, lookup_level_ObjNr[changed_objNr])
        update_power_sum()
    end
end

function knx_value_update(x)
    knx_value_changed(x)
end

sys.read_settings("settings")

```

10.4.3. ETS

Parameter

1.8.2 TouchIT AC4 > General

General										
	Master PIN	0								
+ Page 1	Use PIN for settings dialog	☒ No ☐ Yes								
+ Page 2	Layout	2X4-Layout								
+ Page 3	Icon theme	☐ Bright ☒ Dark (for bright surfaces)								
+ Page 4		<table border="1"> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> </tr> <tr> <td>7</td> <td>8</td> </tr> </tbody> </table>	1	2	3	4	5	6	7	8
1	2									
3	4									
5	6									
7	8									
+ Page 5	Display menu page	☒ No ☐ Yes								
+ Page 6	Display user language chooser	☒ No ☐ Yes								
	Page scheme	☐ 5 Pages / 1 Alarm Page ☒ 6 Pages								
	Global format identifiers	;LOGIC=electric_power.lua								
	Additional identifiers									
	Page 1 Name [;Format]									
	Use PIN for Page2	☒ No ☐ Yes								
	Page 2 Name [;Format]									
	Use PIN for Page3	☒ No ☐ Yes								
	Page 3 Name [;Format]									
	Use PIN for Page4	☒ No ☐ Yes								
	Page 4 Name [;Format]									
	Use PIN for Page5	☒ No ☐ Yes								
	Page 5 Name [;Format]									
	Use PIN for Page6	☒ No ☐ Yes								
	Page 6 Name [;Format]									
	Use RTC	☒ No ☐ Yes								
	Use logic functions	☐ No ☒ Yes								
	Logic scheme	IO-Schema 1								

Group Objects

Channels

Parameters

e2 / subject to change

1.8.2 TouchIT AC4 > Page 1 > Element 1: Total Power

General	Descriptor	Total Power								
Page 1	Object Type	2 Byte								
Element 1: Total Power	Element Type	2-Byte-Float-Text-Button								
Element 2: Test Red	Element Size	X-Large								
Element 3: Power 1	Interactive	☒ No ☐ Yes								
Element 4: level epower 1	Use Element PIN	☒ No ☐ Yes								
Element 5: Power 2	Align steps	☐ No ☒ Yes								
Element 6: level epower 2	Expand horizontal	☐ No ☒ Yes								
Element 7: Power 3	Expand vertical	☐ No ☒ Yes								
Element 8: level epower 3	Name [;Format]	Total Power;PF= kW;DC=2								
Page 2	<table border="1"> <tr><td>1</td><td>2</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td></tr> </table>		1	2	3	4	5	6	7	8
1	2									
3	4									
5	6									
7	8									
Page 3										

1.8.2 TouchIT AC4 > Page 1 > Element 2: Test Red

General	Descriptor	Test Red								
Page 1	Object Type	1 Bit								
Element 1: Total Power	Element Type	1-Bit-Value-Pushbutton								
Element 2: Test Red	Element Size	Normal								
Element 3: Power 1	Interactive	☐ No ☒ Yes								
Element 4: level epower 1	Use Element PIN	☒ No ☐ Yes								
Element 5: Power 2	Align steps	☐ No ☒ Yes								
Element 6: level epower 2	Expand horizontal	☐ No ☒ Yes								
Element 7: Power 3	Expand vertical	☐ No ☒ Yes								
Element 8: level epower 3	Name [;Format]	Test; LABEL=Test red;LOGIC=push_button('press');LOG								
Page 2	<table border="1"> <tr><td>1</td><td>2</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td></tr> </table>		1	2	3	4	5	6	7	8
1	2									
3	4									
5	6									
7	8									
Page 3										

Name [;Format]: Test; LABEL=Test red;LOGIC=push_button('press');LOGICR=push_button('release')

1.8.2 TouchIT AC4 > Page 1 > Element 3: Power 1

General	Descriptor	Power 1								
Page 1	Object Type	2 Byte								
Element 1: Total Power	Element Type	2-Byte-Float-Text-Button								
Element 2: Test Red	Element Size	X-Large								
Element 3: Power 1	Interactive	☒ No ☐ Yes								
Element 4: level epower 1	Use Element PIN	☒ No ☐ Yes								
Element 5: Power 2	Align steps	☐ No ☒ Yes								
Element 6: level epower 2	Expand horizontal	☐ No ☒ Yes								
Element 7: Power 3	Expand vertical	☐ No ☒ Yes								
Element 8: level epower 3	Name [;Format]	Power 1;PF= kW;DC=2								
Page 2	<table border="1"> <tr><td>1</td><td>2</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td></tr> </table>		1	2	3	4	5	6	7	8
1	2									
3	4									
5	6									
7	8									
Page 3										

1.8.2 TouchIT AC4 > Page 1 > Element 4: level epower 1

General	Descriptor	level epower 1								
Page 1	Object Type	1 Byte								
Element 1: Total Power	Element Type	1-Byte-Value-Picture-Button 0..255								
Element 2: Test Red	Element Size	Normal								
Element 3: Power 1	Interactive	☒ No ☐ Yes								
Element 4: level epower 1	Use Element PIN	☒ No ☐ Yes								
Element 5: Power 2	Align steps	☐ No ☒ Yes								
Element 6: level epower 2	Expand horizontal	☐ No ☒ Yes								
Element 7: Power 3	Expand vertical	☐ No ☒ Yes								
Element 8: level epower 3	Name [;Format]	;IMGVAL=traffic_light								
Page 2	<table border="1"> <tr><td>1</td><td>2</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td></tr> </table>		1	2	3	4	5	6	7	8
1	2									
3	4									
5	6									
7	8									
Page 3										

Channel 2 and 3 are set up identically, only named accordingly.

Group Objects

Number	Name	Object Function	Description	Group Address	Length
39	IO Logic 1-Bit 7	Logic			1 bit
40	IO Logic 1-Bit 8	Logic			1 bit
41	IO Logic 1-Bit 9	Logic			1 bit
42	IO Logic 1-Byte 0	Logic			1 byte
43	IO Logic 1-Byte 1	Logic			1 byte
44	IO Logic 1-Byte 2	Logic			1 byte
45	IO Logic 1-Byte 3	Logic			1 byte
46	IO Logic 1-Byte 4	Logic			1 byte
47	IO Logic 1-Byte 5	Logic			1 byte
48	IO Logic 1-Byte 6	Logic			1 byte
49	IO Logic 1-Byte 7	Logic			1 byte
50	IO Logic 2-Byte 0	Logic	electric power 1	1/1/0	2 bytes
51	IO Logic 2-Byte 1	Logic	electric power 2	1/1/1	2 bytes
52	IO Logic 2-Byte 2	Logic	electric power 3	1/1/2	2 bytes
53	IO Logic 2-Byte 3	Logic			2 bytes
54	IO Logic 2-Byte 4	Logic			2 bytes
55	IO Logic 2-Byte 5	Logic			2 bytes
56	IO Logic 2-Byte 6	Logic			2 bytes
57	IO Logic 2-Byte 7	Logic			2 bytes
58	IO Logic 4-Byte 0	Logic			4 bytes
59	IO Logic 4-Byte 1	Logic			4 bytes
60	IO Logic 4-Byte 2	Logic			4 bytes
61	IO Logic 4-Byte 3	Logic			4 bytes
62	IO Logic 4-Byte 4	Logic			4 bytes
63	1.1-A IO, Value_Total Power	2-Byte Float Value	sum electric power	1/1/3	2 bytes
64	1.1-B Input, Feedback_Total Power	2-Byte Float Value			2 bytes
67	1.2-A Output, Value_Test Red	1-Bit Value Button			1 bit
68	1.2-B Output, Value_B_Test Red	1-Bit Value Button			1 bit
71	1.3-A IO, Value_Power 1	2-Byte Float Value	electric power 1	1/1/0	2 bytes
72	1.3-B Input, Feedback_Power 1	2-Byte Float Value			2 bytes
75	1.4-A IO, Value_level epower 1	1-Byte Value	level epower 1	1/1/4	1 byte
76	1.4-B Input, Feedback_level epower 1	1-Byte Value			1 byte
79	1.5-A IO, Value_Power 2	2-Byte Float Value	electric power 2	1/1/1	2 bytes
80	1.5-B Input, Feedback_Power 2	2-Byte Float Value			2 bytes
83	1.6-A IO, Value_level epower 2	1-Byte Value	level epower 2	1/1/5	1 byte
84	1.6-B Input, Feedback_level epower 2	1-Byte Value			1 byte
87	1.7-A IO, Value_Power 3	2-Byte Float Value	electric power 3	1/1/2	2 bytes
88	1.7-B Input, Feedback_Power 3	2-Byte Float Value			2 bytes
91	1.8-A IO, Value_level epower 3	1-Byte Value	level epower 3	1/1/6	1 byte
92	1.8-B Input, Feedback_level epower 3	1-Byte Value			1 byte

Only logic group objects nr. 32-62 are triggering knx_value_changed and knx_value_update, So the group addresses for electric power x are connected to logic objects and to the objects of the display elements.

10.4.4. Icons

Custom icons for the traffic lights.

Filename	Icon
traffic_light_0.png	
traffic_light_1.png	
traffic_light_2.png	

10.4.5. Commissioning

1. Save the LUA source code as electric_power.lua.
2. Save the Icons and rename them as indicated in the table.
3. Start the TouchIT [Configurator](#) and upload Logic and Icons.
4. Create the ETS application and download it to the device.
5. By sending values to group address of "electric power x" the traffic light should change, if the limits set in the device settings are exceeded.

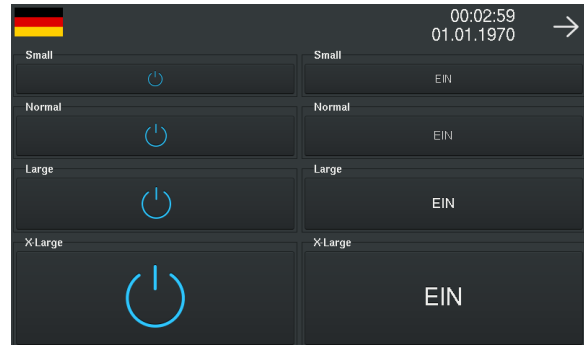
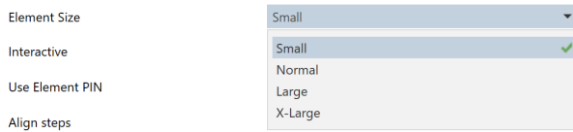
e2 / subject to change

11. Icons

11.1. Size

The standard icon sizes are shown in the table below, the Table also shows the corresponding [Element Size](#) ETS parameter. Icons are not scaled on the device, so user defined icons have to be the right size. They need to follow the [Naming convention](#) and the file type has to be png.

Standard icon size [pixel]		
Element Size	320 x 240 Pixel	800 x 480 Pixel
Small	18x18	28x28
Normal	28x28	42x42
Large	48x48	58x58
X-Large	88x88	116x116



11.2. Naming convention

Icon file names should not contain any special characters or spaces. For IMGSET the correct suffix is required in the filename so the icon can be assigned to the correct function. When using icons with the parameter IMGSET and IMG, the suffix and file extension are omitted, e.g. ;IMGSET=ONOFF.

Which of the following parameters is used depends on the used [Element Type](#).

11.2.1. IMGSET On/Off Element Types

Naming convention

	File name	
Button	xxx_b_on.png	xxx_b_off.png
Label	xxx_l_on.png	xxx_l_off.png

Example

	ONOFF_b_on.png
	ONOFF_b_off.png
	ONOFF_l_on.png
	ONOFF_l_off.png
ETS Parameter Name [;Format]	; IMGSET=ONOFF

11.2.2. IMGSET Up/Down Element Types

Naming convention

	File name	
Button	xxx_b_up.png	xxx_b_down.png

Example

	PM_up.png
	PM_down.png
ETS Parameter Name [;Format] ; IMGSET=PM	

11.2.3. IMGSETS Quad Element Types

Important note the S at the end of IMGSETS

Naming convention

	File name	
Label	xxx_l_on.png	xxx_l_off.png

Example

	AL_l_off.png
	AL_l_off.png
	BELL_l_off.png
	BELL_l_on.png
ETS Parameter Name [;Format] ; IMGSETS=BELL,AL	

11.2.4. IMG

Example

	RING.png
	CLOCK_ICO.png
	SEND.png
	ILLUMINATION.png
ETS Parameter Name [;Format] ; IMG=ILLUMINATION	

11.2.5. IMGVAL

This allows for an KNX value depended image. In the example below ampel_0.png would be displayed for bus value 0, ample_1.png for value 1 and ampel_2.png for value 2 and above.

There always has to be an image with the filename “*_0.png”, it can’t be omitted.

Example

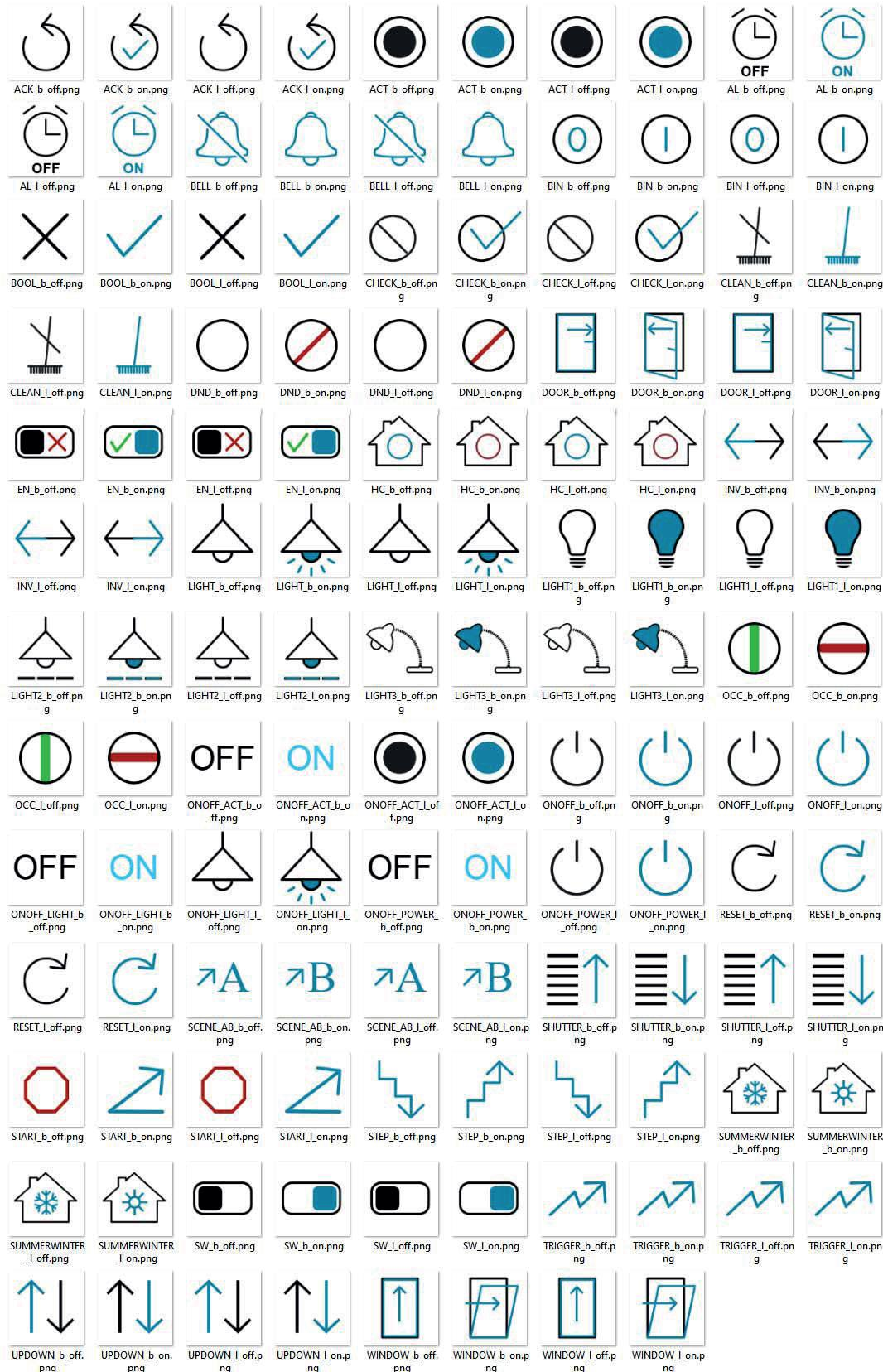
	ampel_0.png
	ampel_1.png
	ampel_2.png
ETS Parameter Name [;Format] ; IMGVAL=ampel	

11.3. Standard Icons

All standard icons are available in Small, Normal, Large and XLarge.

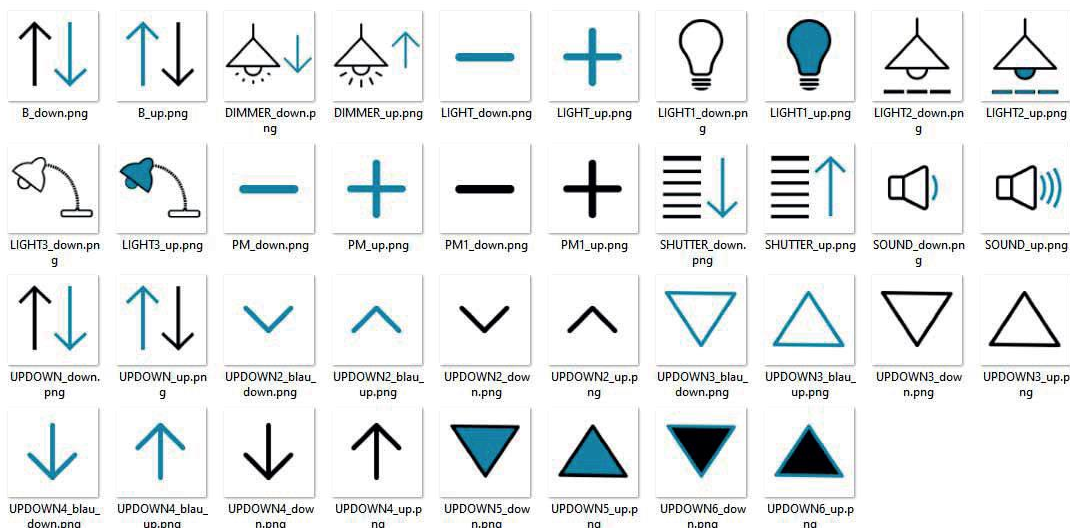
11.3.1. Dark Icons

IMGSET On/Off

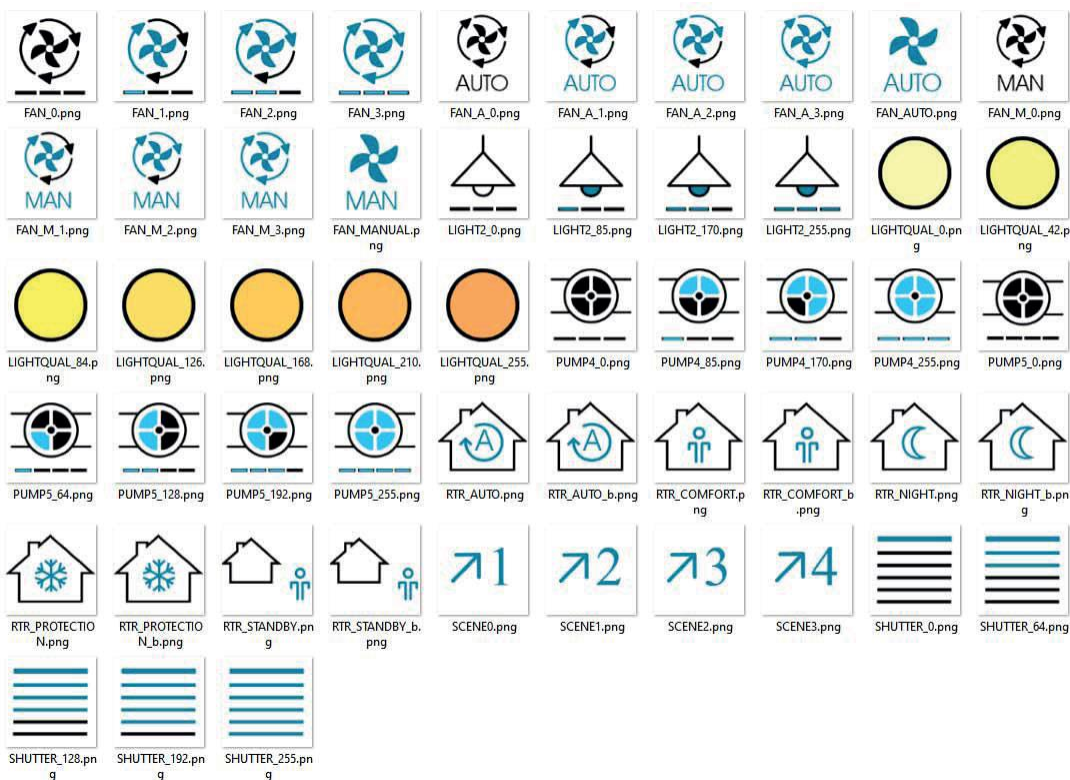


ez / subject to change

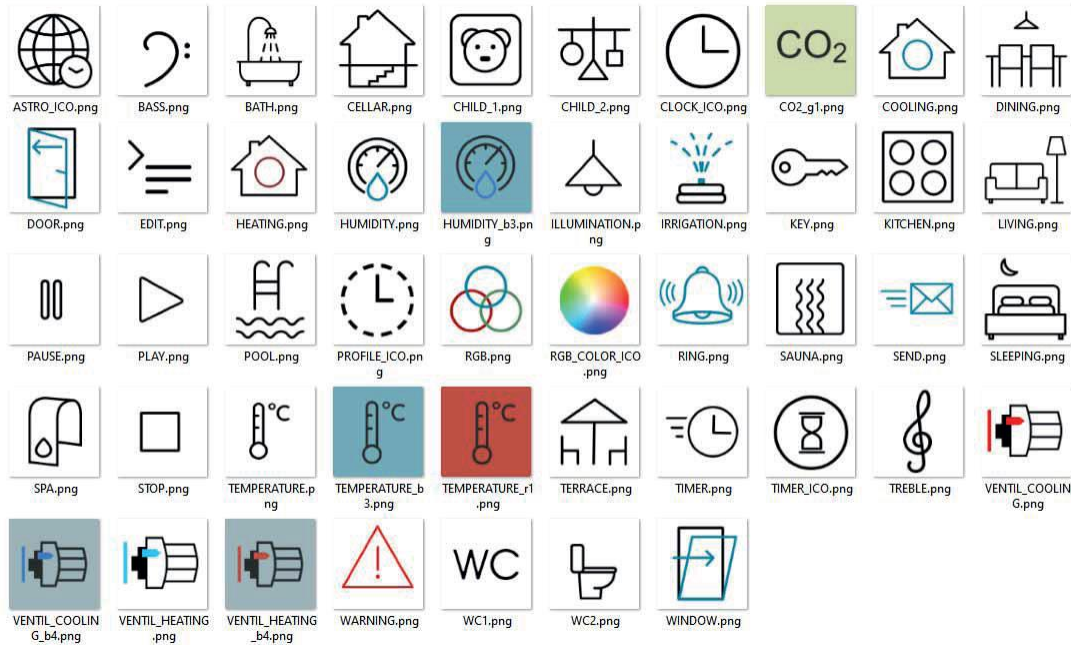
IMGSET Up/Down



IMGVAL

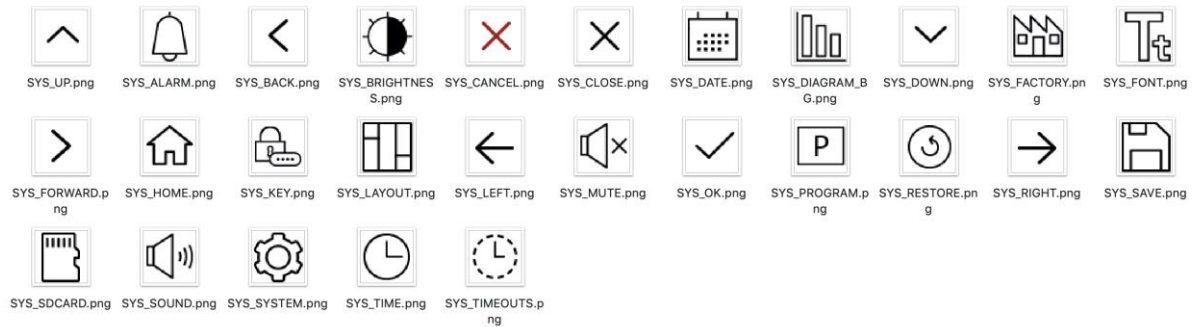


IMG



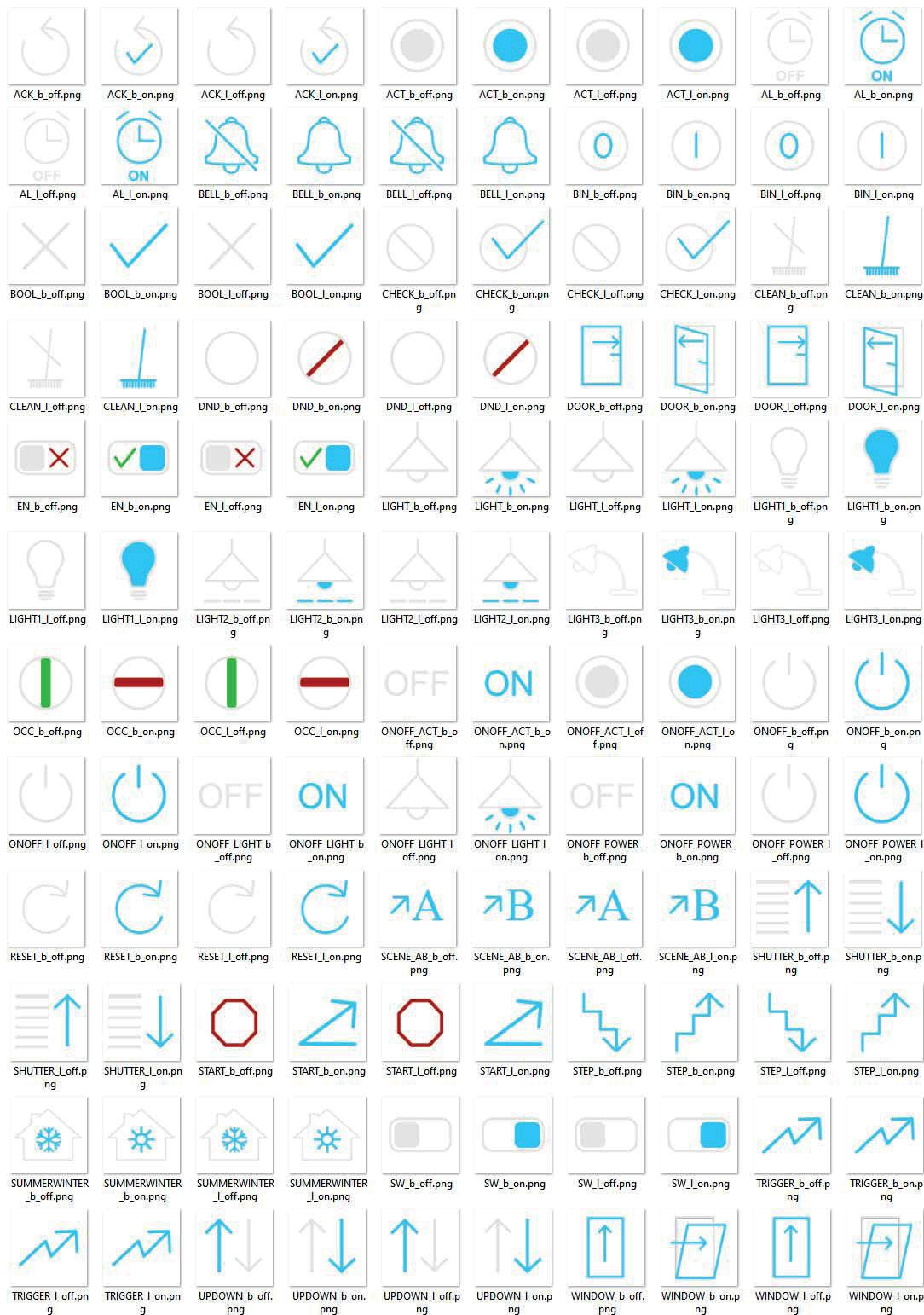
System Icons

Only available in 32x32 / 48x48 Pixel

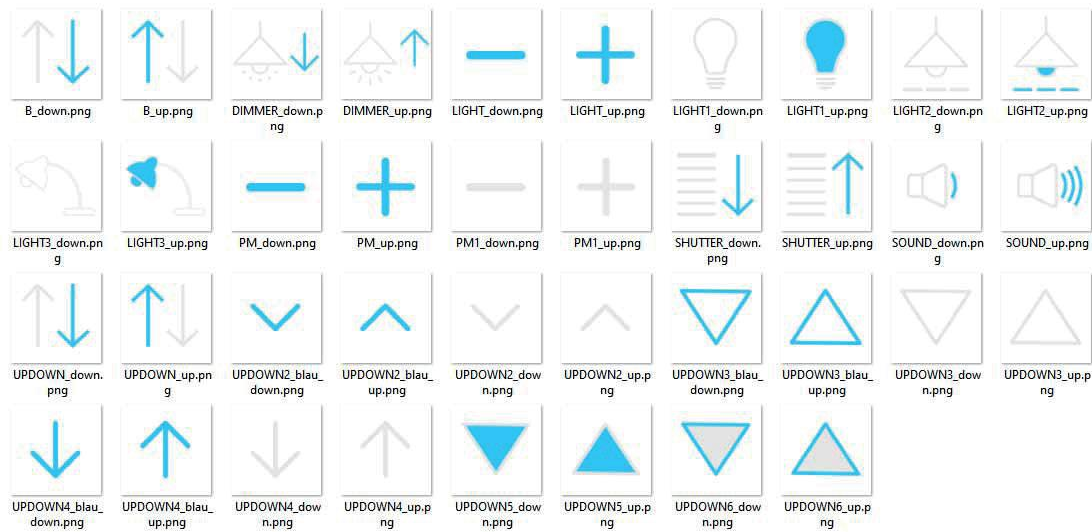


11.3.2. Bright Icons

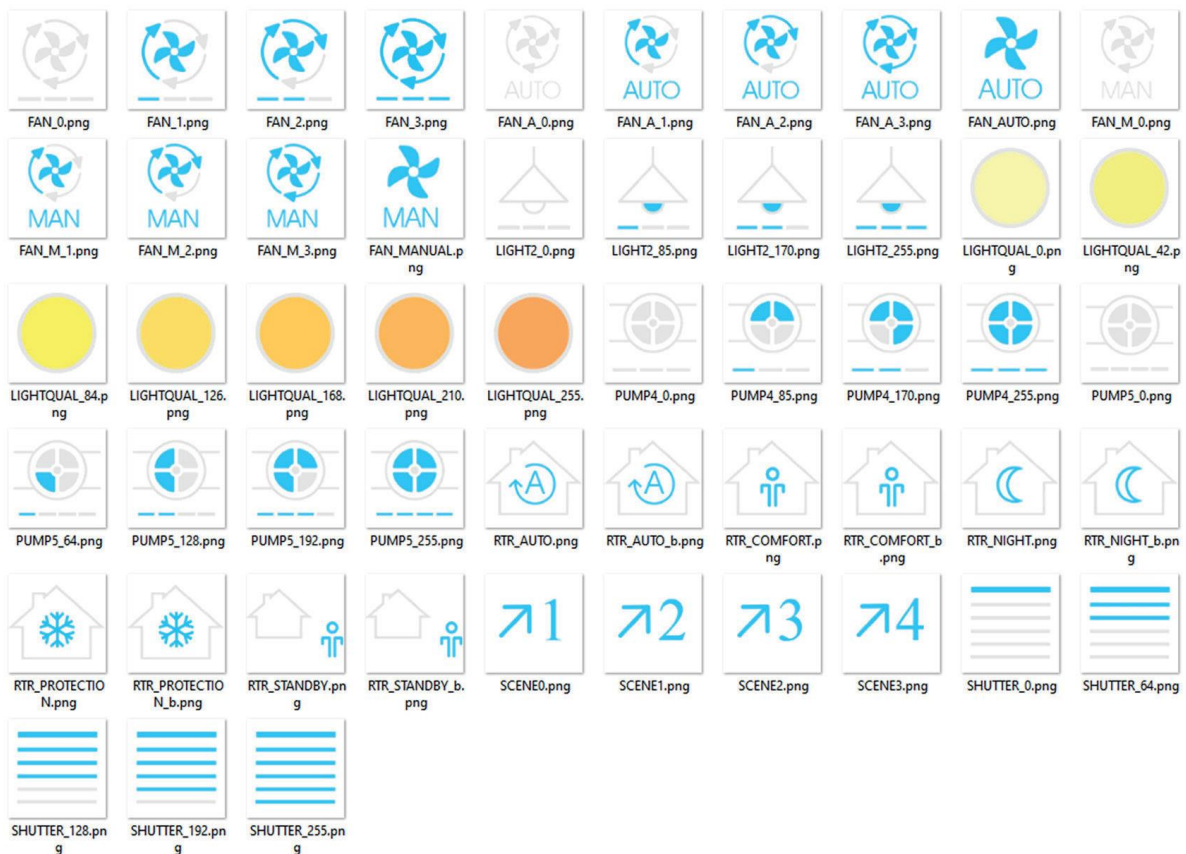
IMGSET On/Off



IMGSET Up/Down



IMGVAL



IMG



System Icons

Only available in 32x32 / 48x48 Pixel



12. Other documents

For further documents (RTR, custom layout | Touch_IT Creator) please contact service@arcus-eds..

13. Imprint

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