

CAN-TOUCH

Version 2.18 EN

CAN Touchscreen



CAN-TOUCH Touchscreen without sensor module
CAN-TOUCH/TFS Touchscreen with sensor module
(-BK = black, -SI = silver)
CT -TFS Sensor module extra

Installation instructions
Operation

en

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Safety requirements



These instructions are intended predominantly for authorised professionals. The chapter “Operation“ is intended for end users.

All installation and connection work on the touchscreen must only be carried out in a zero-volts state.

The opening, connection and commissioning of the device may only be carried out by competent personnel. While doing so, all local safety requirements must be adhered to.

The device corresponds to the latest state of the art and fulfils all necessary safety conditions. It may only be used or deployed in accordance with the technical data and the safety conditions and rules listed below. When using the device, the legal and safety regulations apposite to the particular use are also to be observed. Incorrect use will result in the negation of any liability claims.

- ▶ The device must only be installed in a dry interior room.
- ▶ For safety reasons, the system should only be left in manual mode when testing. In this operating mode, no maximum temperatures or sensor functions are monitored.
- ▶ Safe operation is no longer possible if the CAN touchscreen or connected equipment exhibits visual damage, no longer functions or has been stored for a lengthy period of time under unsuitable conditions. If this is the case, place the CAN touchscreen or the equipment out of service and secure against unintentional use.

Maintenance

If treated and used correctly, the device will not require maintenance. Use a cloth moistened with non-aggressive alcohol (such as meths) to clean. Harsh solvents such as chlorethenes or trichloroethylene are not admissible.

During repair, the constructive characteristics of the device must not be changed. Spare parts must correspond to the original parts and be used as intended.

Device description

The CAN-TOUCH is a touch sensitive monitor. It is a display device and programming unit for CAN bus devices. Simple touching using the touch stylus allows the changing of specified values or swapping over to another page. Communication with several CAN bus devices is possible. Data exchange between the touchscreen and the CAN bus devices takes place via the CAN bus.

Prior to commissioning the CAN-TOUCH must be programmed using the program **TA-Designer**, with the programming transferred to the CAN-TOUCH using an SD card.

The touchscreen **CAN-TOUCH/TFS** with inbuilt sensor module also measures the room temperature, the room humidity and the dew point. These values can be displayed in the CAN-TOUCH display and are output to the CAN bus as output variables for further processing in the CAN bus network.

The sensor module can also be retrofitted in a CAN-TOUCH (as a special accessory: **CT-TFS**).

The displayed values are automatically updated every 30 seconds.

System requirements

Programming software: **TA-Designer** and sample graphics are included in the supplied SD card or can be downloaded from our website www.ta.co.at.

X2 devices: All operating system versions; the CAN-TOUCH must have hardware revision (Hw.-Rev.) 2.0 or higher

UVR1611: at least operating system version **A3.25**

CAN-I/O modules 35 or 44: at least operating system version **A2.02**

CAN-BC bus converter: at least operating system version **A1.10**

CAN-EZ energy meter: at least operating system version **A1.03**

Power supply

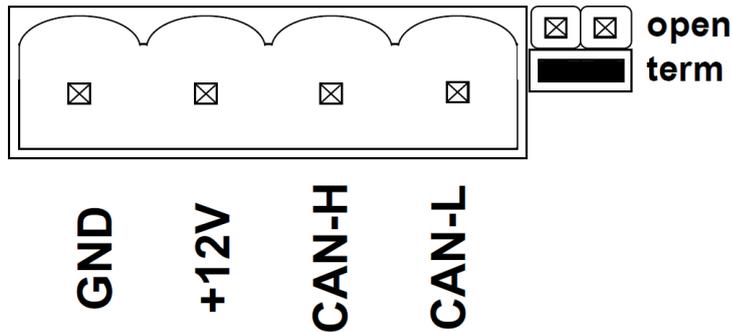
The CAN power supply unit provided **must** be connected to supply the CAN-TOUCH with power. The connection of the power pack can be made to any point on the CAN network (connection to +12V and earth GND). **The red marked conductor is the positive pole.**

Cable selection and network topology

The basics of bus cabling are described in detail in the CAN bus device manuals, so – with the exception of termination – this is not described in detail here.

Each CAN network is to be provided with an 120 Ohm bus termination at the first and last network member (= terminate using a jumper). Hence each CAN network always has two terminating resistances (each at the end). Spur lines or star-shaped CAN topologies are not permitted by the official specification!

The termination of the CAN-TOUCH takes place on the rear side of the device using a jumper.



CAN-TOUCH programming

The CAN-TOUCH is programmed with **TA-Designer** software. The latest version of **TA-Designer** should always be used.

The programming software is contained on the supplied SD-card or can be downloaded from our website www.ta.co.at. Start the installation program TA-Designer_1_14.exe and follow the program installation instructions.

Further details can be found in the TA-Designer help menu.

Analogue network outputs

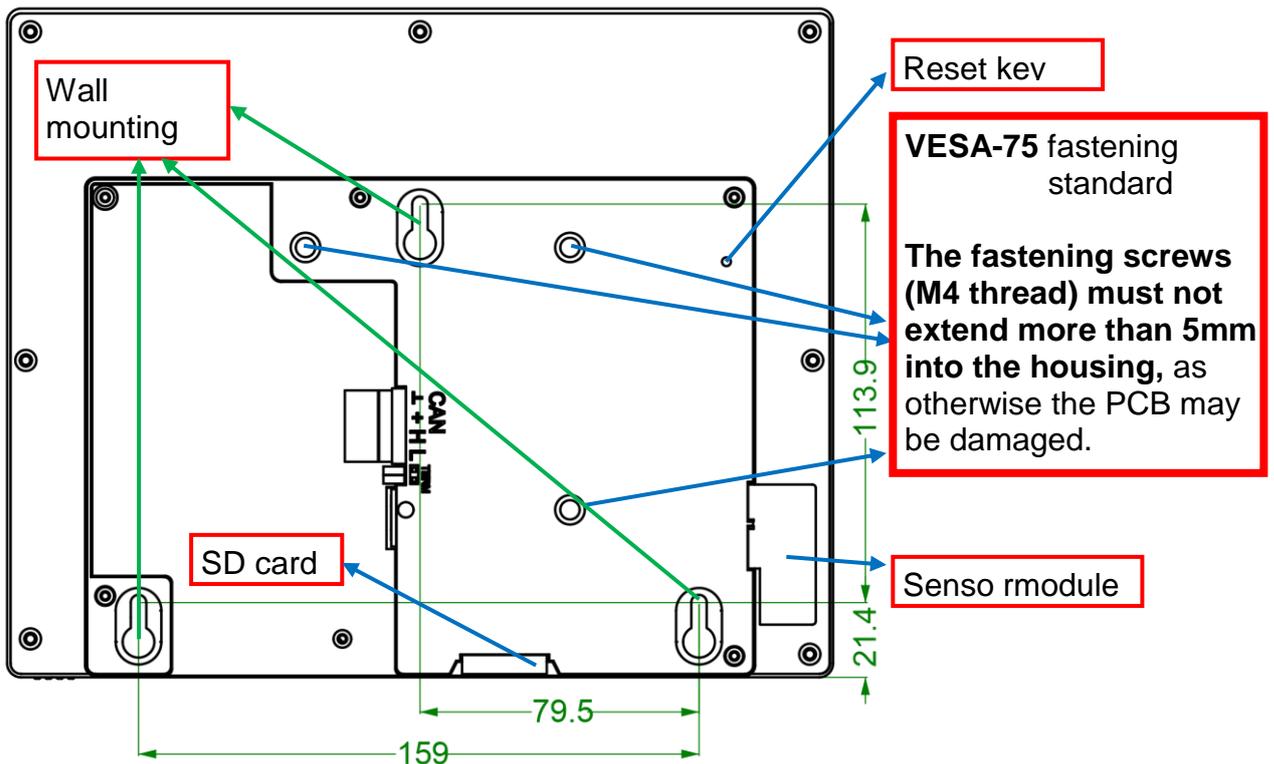
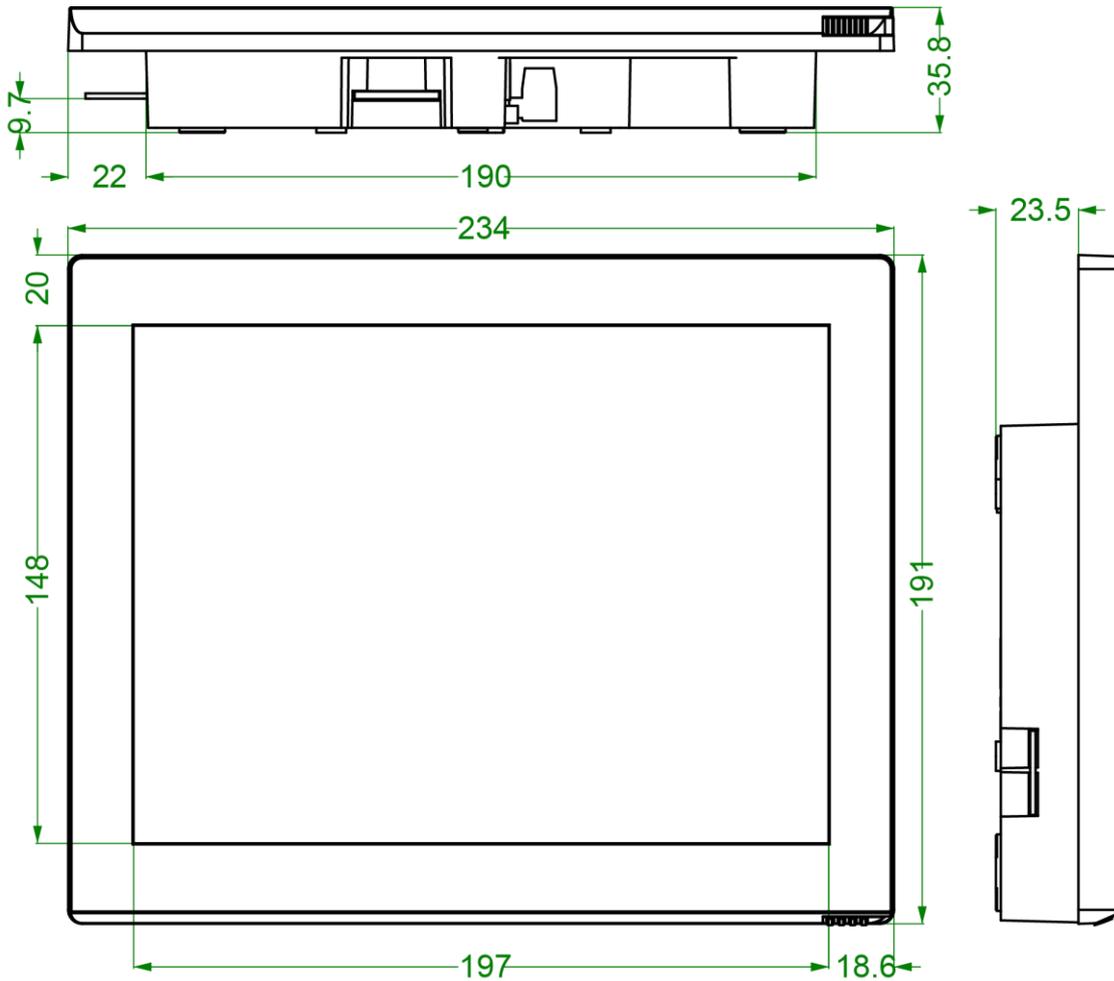
With an integrated sensor module, the CAN-TOUCH outputs the following values:

Room temperature [°C]	Network output 1
Room humidity [°C]	Network output 2
Dew point temperature [°C]	Network output 3

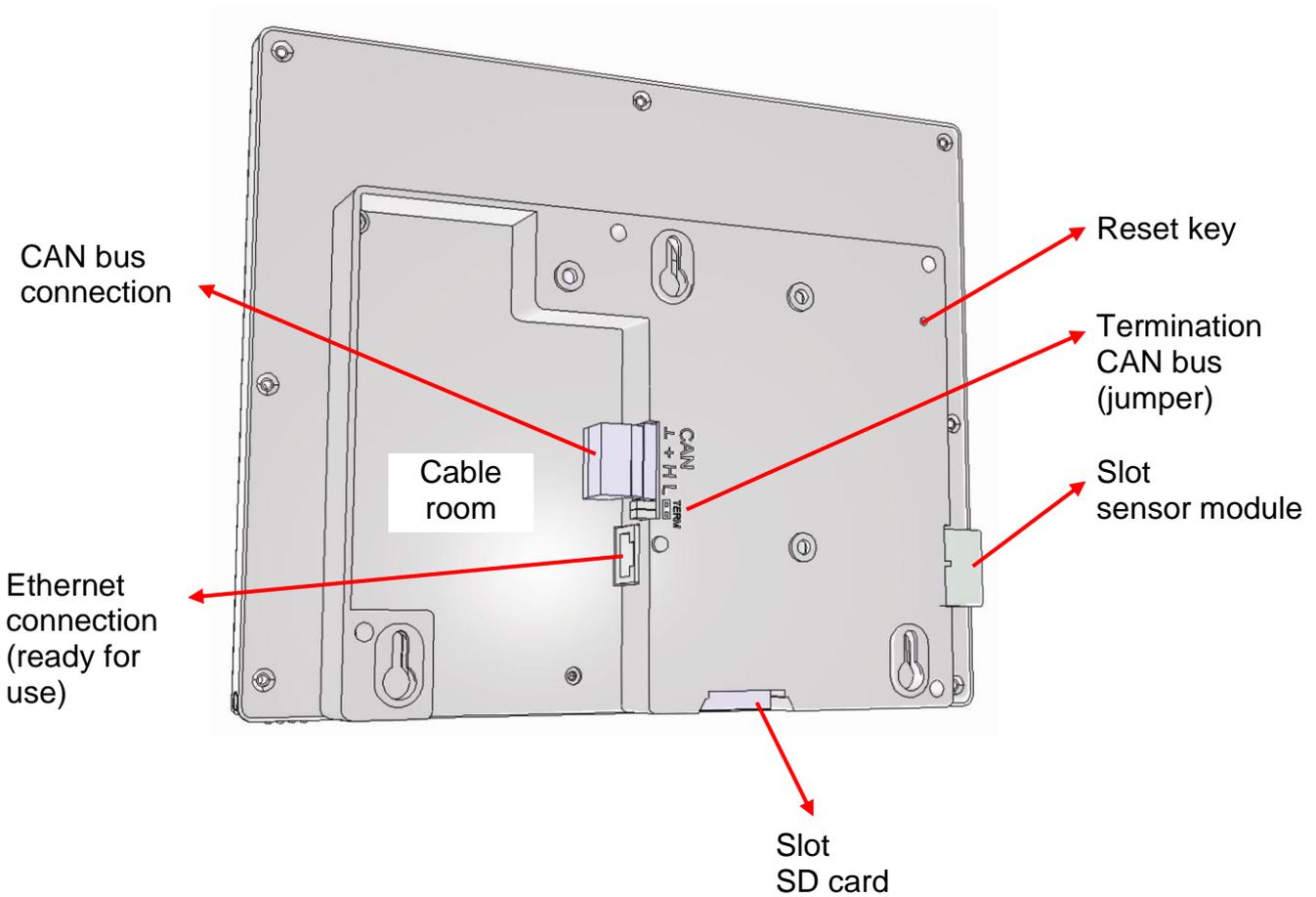
If the sensor module is not fitted, the values of these 3 network outputs are set to zero.

Installation and connection of the device

Dimensions in mm



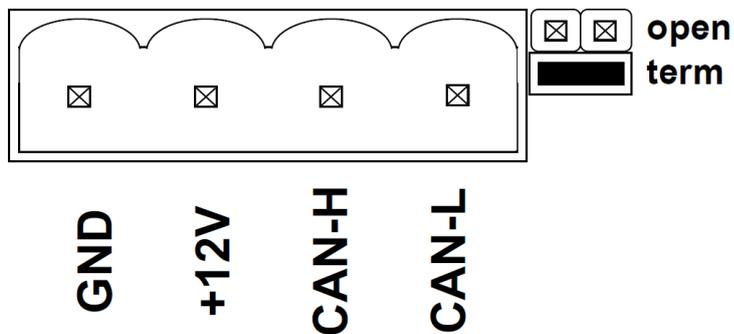
View of the rear side



VESA-75 fastening points

The fastening screws (M4 thread) must not extend more than **5mm** into the housing, as otherwise the PCB may be damaged.

CAN bus cable connection



Technical data

Device dimensions (W/H/D):	234 / 191 / 36 mm
Display diagonal	9,7" or 245 mm
Display	197 / 148 mm
Mounting	Wall mounting / VESA-75 holes
Width-to-height ratio	4:3
Physical resolution	1024(H)x768(V)
Number of colours	65.536
Brightness	220 cd/m ²
Contrast	600:1
Backlight	White LED
Operating voltage	12V DC
Power consumption	Max. 5W including power pack
Viewing angle (type) hor./ver.]	150°/130°
Touch panel	4-wire resistive
Touch panel lifetime (touches)	>10 000 000
Surface hardness	3 H
Amount of pressure	20 – 150 g
Connections	CAN
Programming	via SD card
SD card	File system FAT16 or FAT32
Power supply (power pack)	230V AC / 12V DC
Protection class	IP20
Permissible ambient temperature	+10°C to +40°C
Other properties	Touch stylus integrated in the housing

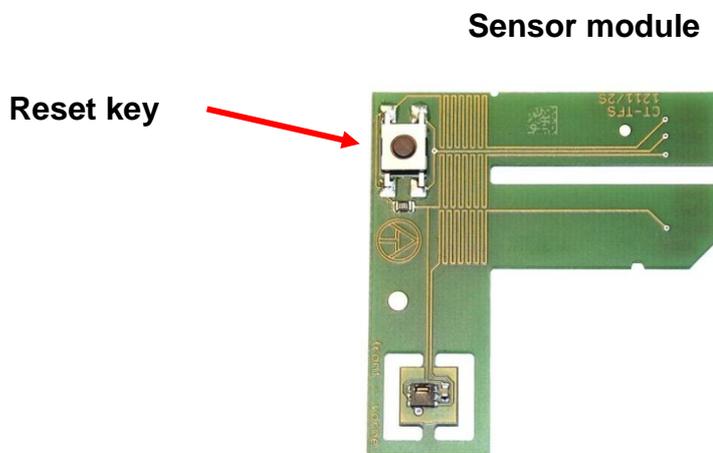
Commissioning

Connecting the CAN-TOUCH

Connection of the CAN-TOUCH to the CAN bus while observing terminating resistance rules. Connection of the supplied power pack for support of the 12V CAN bus power supply an any point in the CAN bus network.

Program upload

- 1.** Saving the files created with *TA-Designer* (all *.raw files and the files settings.ct and messages.ct) from the folder CAN_TOUCH of the project directory in the root directory or in a previously created language folder on the SD card (e.g. folder "en").
The folders dat, font, menu, prg and system must not be deleted.
- 2.** Plug the SD card in the CAN-TOUCH, the CAN-TOUCH reboots.
During booting the operating system version is first displayed bottom left, then a welcome page, then the first programming page is loaded.
The message "SYSTEM FILES FOR DRAWING NOT FOUND ON SD CARD" means that the SD card is inserted poorly or not at all.
- 3.** If the reboot does not take place automatically: Repeat from point 2 or press the reset button on the rear side of the CAN-TOUCH housing with a thin pin or press the key on the sensor module. After a few seconds there is an a whistling tone. As soon as the whistling tone can be heard, the reset key must be released. Upon booting the operating system version is first displayed at the bottom left of the CAN-TOUCH, followed by a welcome page before the first programming page is displayed.



Operating system update

1. Download the new operating system from our home page www.ta.co.at and save to the **root directory** of the SD card.
2. **Unplugging** the CAN bus plug on the CAN-TOUCH
3. Insert the SD card in the CAN-TOUCH
4. Press and hold the reset button on the rear side of the CAN-TOUCH housing with a thin pin or press the key on the sensor module and **connect** the CAN bus plug. After a few seconds there is an a whistling tone. The key must be pressed **until the end of the whistling tone**.

The name of the operating system file must be **exe.bin** for this update method.

Another possibility is to start the update using the "**Settings**" link, provided the link has been programmed. In this case, the name of the file can be freely selected (*.bin). This process is described in the "**Operation**" chapter.

SD card and CAN network

During operation the SD card should remain plugged into the CAN-TOUCH, as otherwise in the event of a power failure, the CAN-TOUCH cannot restart.

The message "SYSTEM FILES FOR DRAWING NOT FOUND ON SD CARD" means that the SD card is inserted poorly or not at all.

If the CAN network is interrupted, a **CAN timeout** is displayed on the CAN-TOUCH.

The following folders and files can be found on the SD-card after saving a CAN-TOUCH programming in the root directory:

Example:

 dat	Function data for the Update function of other CAN bus devices can be saved in the folder dat .
 font	Operating system data can be saved in the prg folder.
 menu	The folders dat and prg may contain language sub-folders (see chapter "Update CAN members").
 Musterbilder	
 prg	
 system	<u>The folders font, menu and system must not be changed or removed.</u>
 1.RAW	
 2.RAW	
 3.RAW	
 4.RAW	
 5.RAW	
 6.RAW	
 7.RAW	
 8.RAW	
 9.RAW	The file exe.bin is an operating system file of the CAN-TOUCH.
 CALIB1.CT	The file CALIB1.CT is the calibration file that is responsible for the correct positioning of the buttons on the CAN-TOUCH (see chapter "Calibrating the CAN-TOUCH").
 exe.bin	
 messages.CT	
 settings.CT	The folder " Musterbilder " (= "Sample images") contain graphics files with hydraulics objects.
 TA-Designer.exe	

Commissioning

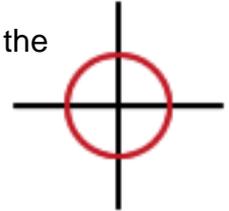
Calibrating the CAN-TOUCH

The sensor surfaces of the various touchscreens are not exactly the same due to manufacturing tolerances.

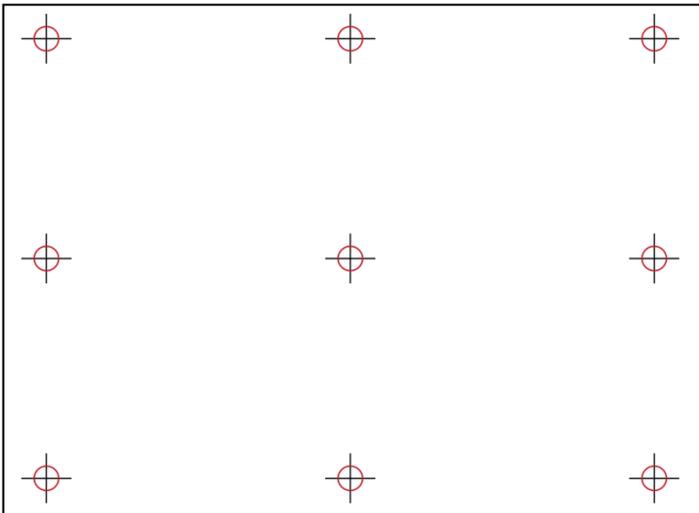
In its supplied state the CAN-TOUCH is already calibrated and the calibration file CALIB1.CT saved on the SD card.

If an SD card of a CAN-TOUCH is to be used in another CAN-TOUCH, the screen must be calibrated.

After plugging this SD card into the CAN-TOUCH, the CAN-TOUCH recognizes the "foreign" SD card. After the booting display, 9 target points which must be touched are sequentially displayed.



Target point arrangement:



For calibrating all 9 target points must be touched individually and sequentially, then the welcome screen appears.

If during calibration points other than the target points are accidentally touched, or if during operation the input points are not recognised or are recognised incorrectly (displaced coordinates), the screen can be recalibrated.

By rebooting the CAN-TOUCH (e.g. by pressing the reset key until the whistling tone sounds) and brief pressing of the reset key **during** display of the boot screen, the 9 calibration target points are displayed.

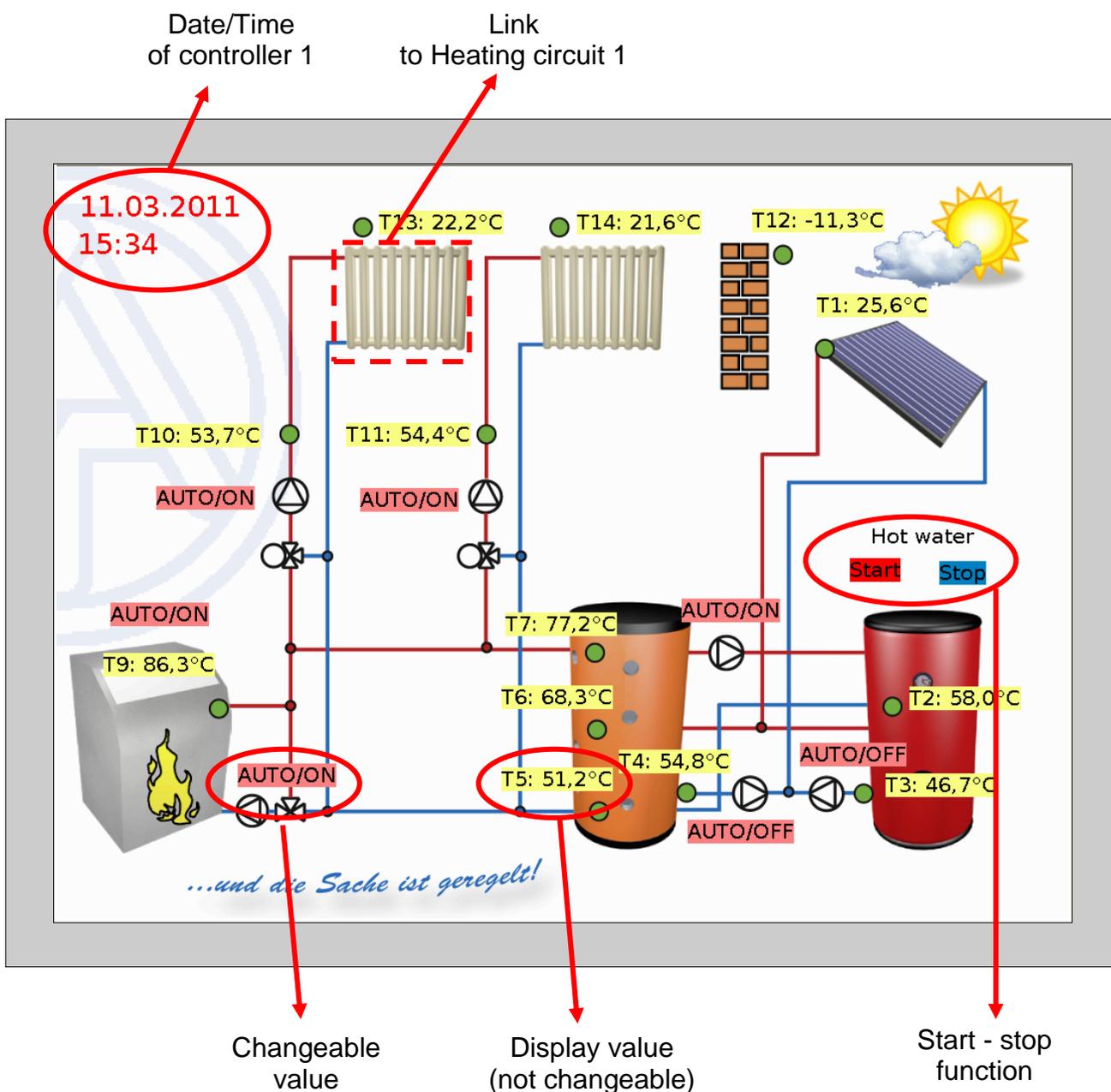
The display of the target points during booting can also be achieved by deleting the file CALIB1.CT from the SD card.

Operation

The way in which values and time programs are changed and how it is possible to change between pages and change settings are shown below using a **typical saved programming**. For reliable operation of the CAN-TOUCH a stylus is kept in the bottom right frame. To activate changes or links the stylus is used to touch the appropriate area of the touchscreen with a gentle pressure. If operating with a finger then the screen surface is tapped. In the following figures touching is symbolised by a **yellow-red arrow**.

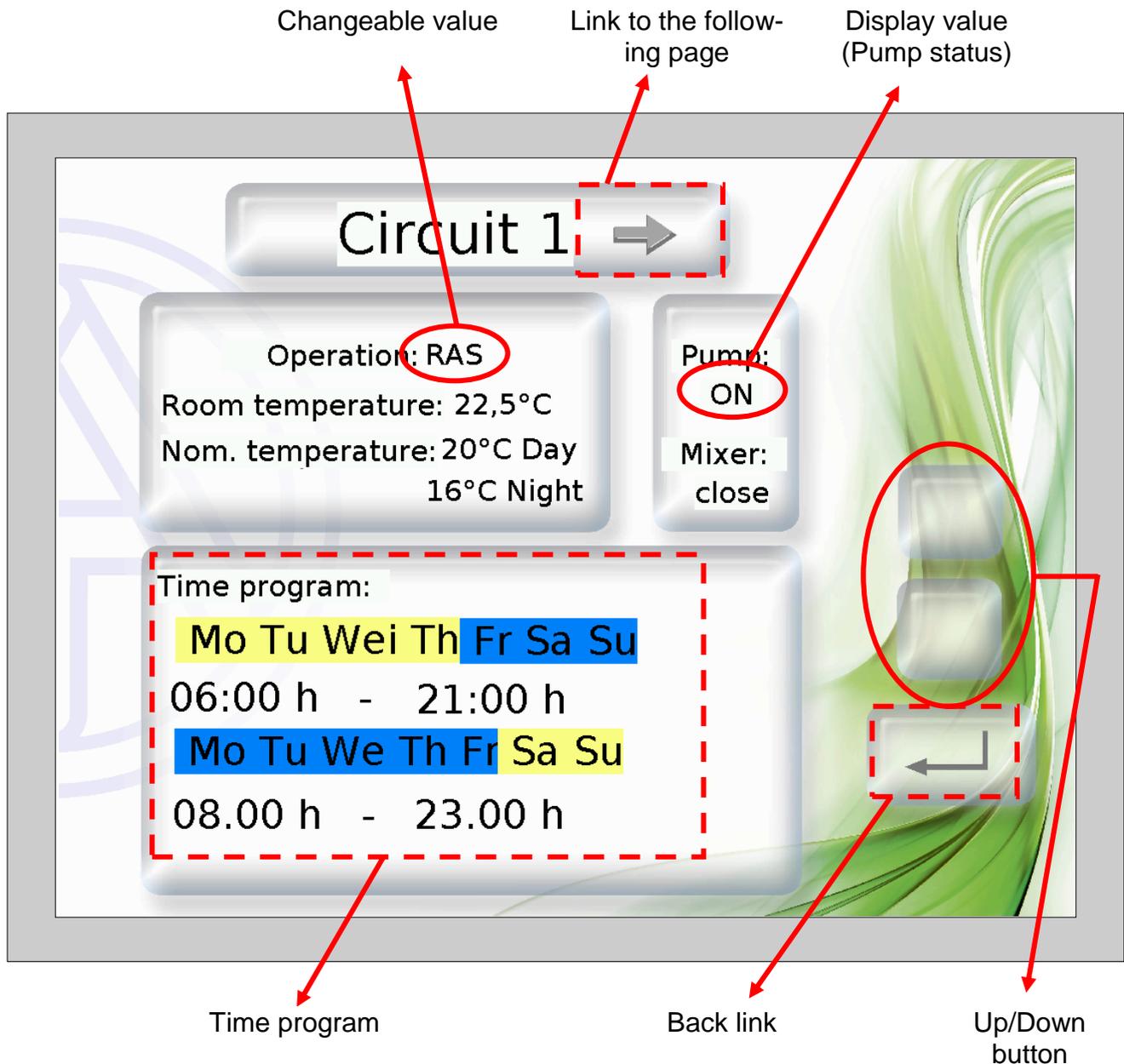


View of a 1st page (example: Factory settings of the UVR1611)



Operation

View of a following page (example: Heating circuit 1)



Programming of the **Time program** must be carried out so that the background for "**Normal**" and "**Selected**" are chosen in different colours. This makes it apparent which day is selected and therefore assigned ("Normal" = assigned, "Selected" = **not** assigned).

Display values (non-changeable)

If non-changeable values (blocked by the programming) are touched, then a soft signal tone is heard, however no change is made in the CAN-TOUCH.

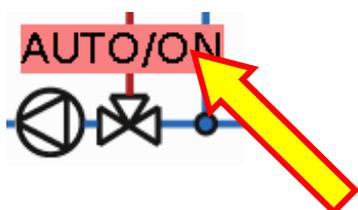
Changing values

There are 2 programming possibilities:

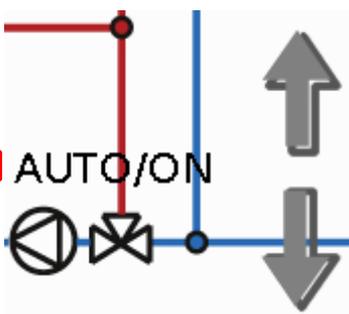
1. Without custom Up/Down buttons: If the value is touched, up/down arrows appear next to the value
2. Programming of custom Up/Down buttons which are valid for all changeable values on this page.

1. Up/down arrows next to the value

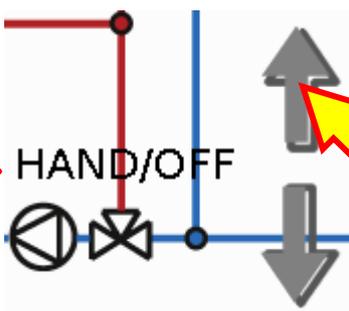
Example: Switching a pump from automatic to manual/OFF.



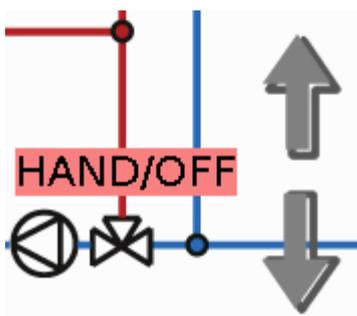
Touch on the value to be changed.



The background and/or the font colour of the value changes (dependent on the programming) and up/down arrows appear.



Touching an arrow changes the value.

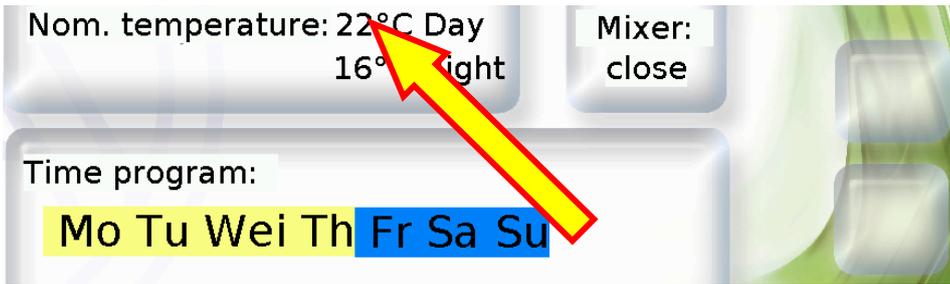


The arrows disappear if another area of the screen is touched. The changed value returns to the original background/font colour. The changed value (mode) is displayed.

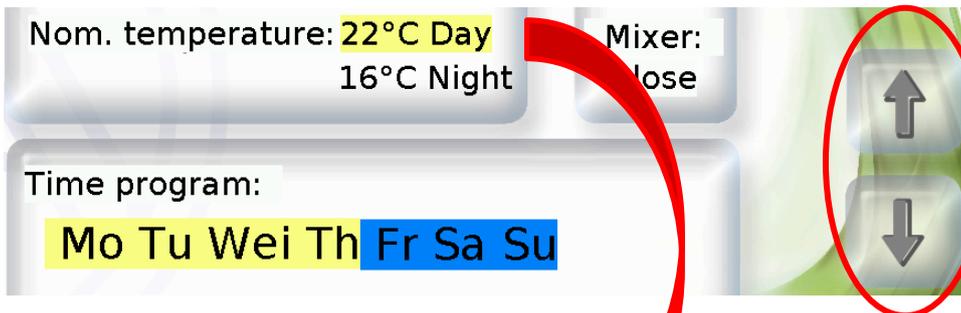
Operation

2. Custom Up/Down buttons:

Example: Changing of the room nominal temperature in heating mode ("Day")



Touch on the value to be changed.



The background and/or the font colour of the value changes (dependent on the programming) and up/down arrows appear in the programmed area.



Touching an arrow changes the value.



The arrows disappear if another area of the screen is touched. The changed value returns to the original background/font colour. The changed value is displayed.

Changing a time program

Changing the weekday assignment:

Example: Friday is no longer to be switched with this time program. In this programming example, the selected days, for which the program should be valid, are highlighted **yellow**, the non-selected days are **blue**.

Mo Tu We Th Fr Sa Su

Touch on the day list.

Mo Tu We Th Fr Sa Su

The day list is now selected with a frame.

Mo Tu We Th Fr Sa Su

Touch the day for which the time program is no longer to apply.

Mo Tu Wei Th Fr Sa Su

The selected day changes its background colour and is now visible as "not selected".

Mo Tu Wei Th Fr Sa Su

The selection frame disappears if another area of the screen is touched. The changed weekday assignment is displayed.

Operation

Changing the switching times:

Example: Change the switch-off time from 22:00 to 21:00 using custom up/down buttons.



Touch the switching time that is to be changed.



The background and/or the font colour of the switching time changes (dependent on the programming) and up/down arrows appear in the programmed area.



Touching an arrow changes the switching time.



The arrows disappear if another area of the screen is touched. The changed switching time returns to the original background/font colour. The changed switching time is displayed.

Start / stop function

A start / stop function is provided in some functions (e.g. Timer, Hot water requirement, Maintenance function). To operate this function on the CAN-TOUCH, custom start / stop fields must be programmed.

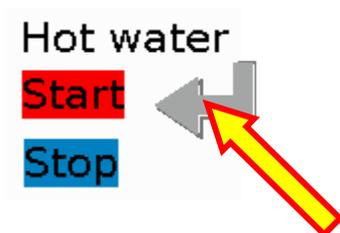
Example: Heating the hot water outside the time window using the Start / stop function in the "Hot water request" function.



Touch on the "Start" field. Dependent on the programming, this field may also have another name.



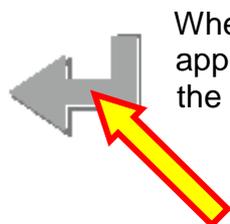
The background and/or the font colour of the Start field changes (dependent on the programming) and a button symbol appears.



Touching the button symbol starts the hot water function which continues until the hot water nominal temperature is reached. The symbol disappears and the Start field regains its original background/font colour.

To stop the function early, the "Stop" field is touched and then the button symbol. Dependent on the programming, the Stop field may also have another name.

Counter reset

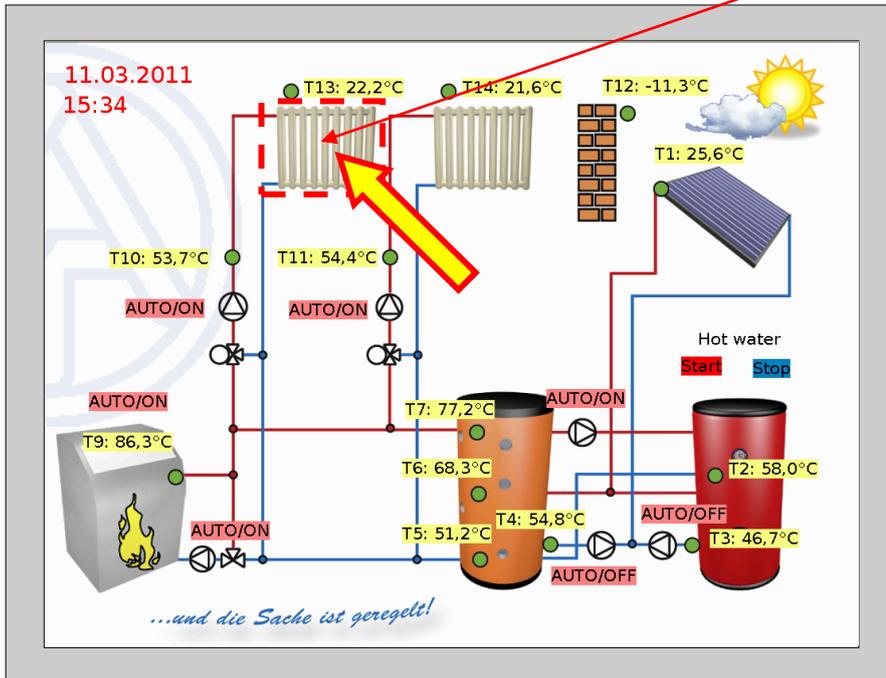


When resetting a meter or a heat quantity counter, the button symbol likewise appears (provided resetting was programmed in the CAN-TOUCH). Touching the symbol resets the counter to zero.

Operation

Switching forward to another page (via a link)

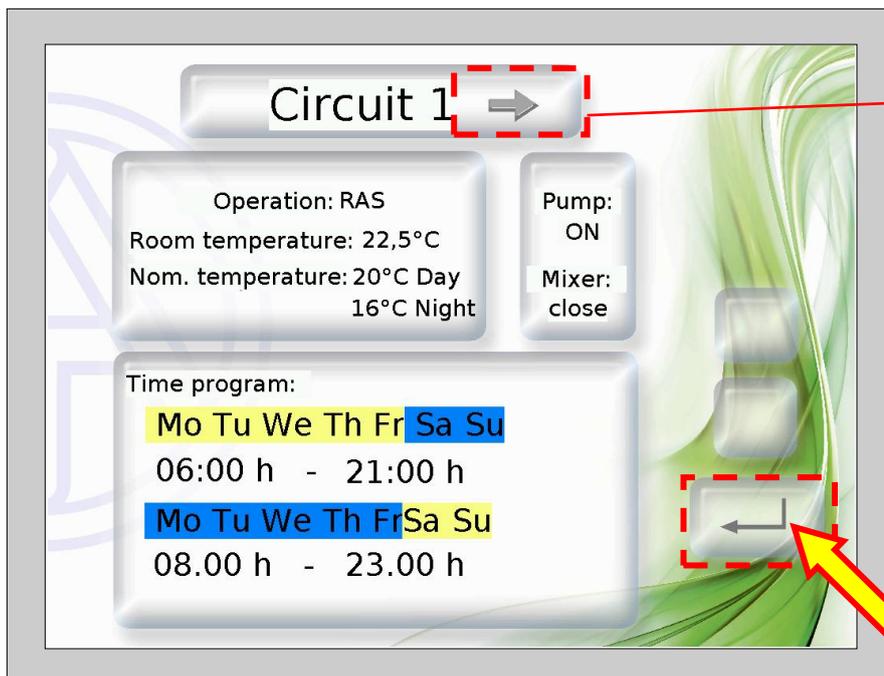
Example: A link to the 2nd page was programmed via the **Heating circuit symbol** of the 1st page. On the 2nd page there is a back link to the first page.



Touch on the link field.



The CAN-TOUCH switches to the 2nd page.



Link to a continuing page

Touch on the back link.
The CAN-TOUCH switches back to the 1st page.

Navigating via "Forward" and "Back" links

If such a link field has been programmed and is touched, then navigating between pages takes place as follows:

Link	Action on the CAN-TOUCH
Back	Switch back to the last selected page
Forward	Toggle back to the page, from which previously the screen was switched using "Back". If the link field is touched, without "Back" having been previously used to navigate from this page, then no page switch is made.

Password protected pages

If a link is used to switch to a page that is password protected, then the password is first asked for using a keyboard displayed on the touchscreen.

Once the character sequence has been input, it is confirmed by pressing the OK key. This displays the chosen page.

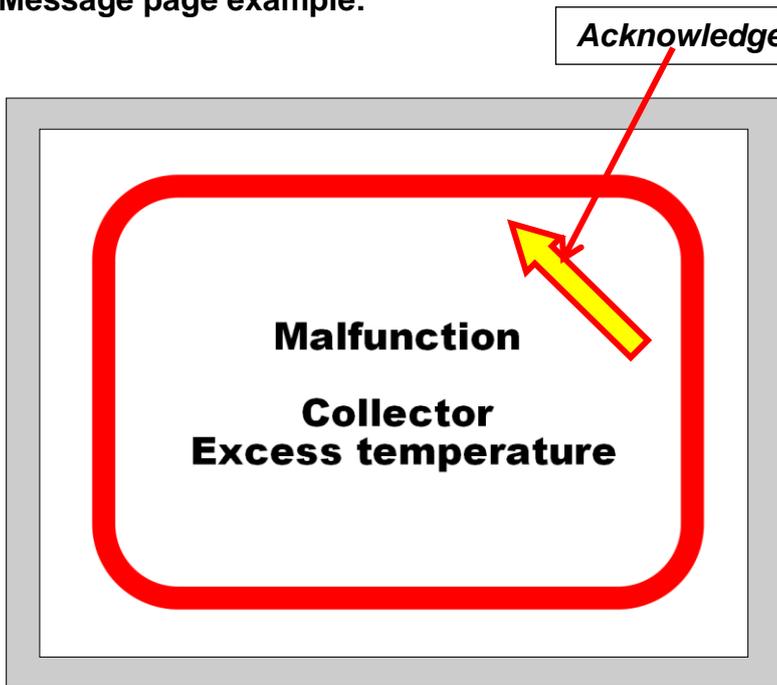
If an incorrect entry is made, there is a back key for deleting the last entered value.



Operation

Messages

Message page example:



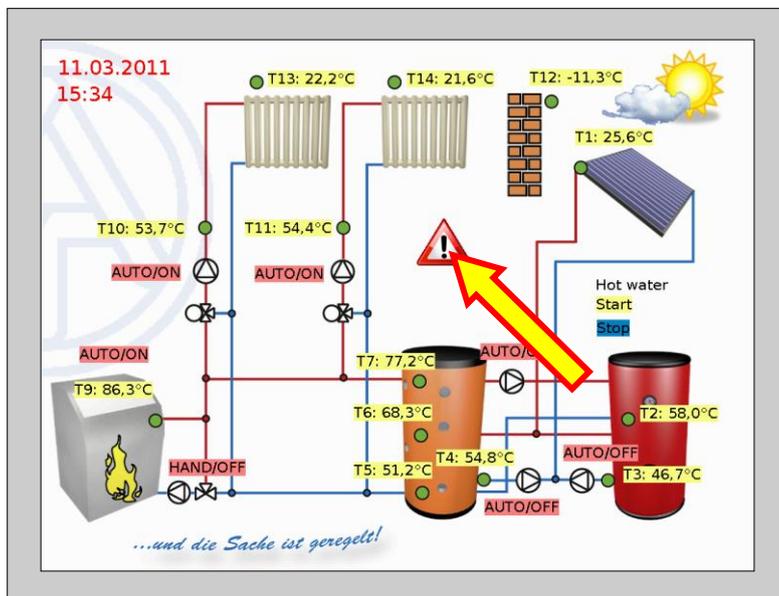
If one or several messages were programmed, then a **pop-up window** will be displayed when the message occurs.

Depending on the programming, this window will stay open until it is acknowledged or as long as the message condition applies.

The page is acknowledged touching the touch screen. You are then returned to the page displayed last.

To specially highlight a message, it can also be combined with an acoustic and/or visual signal (blinking).

While the message page is displayed, the acoustic or visual signal can be acknowledged by touching the touch screen.



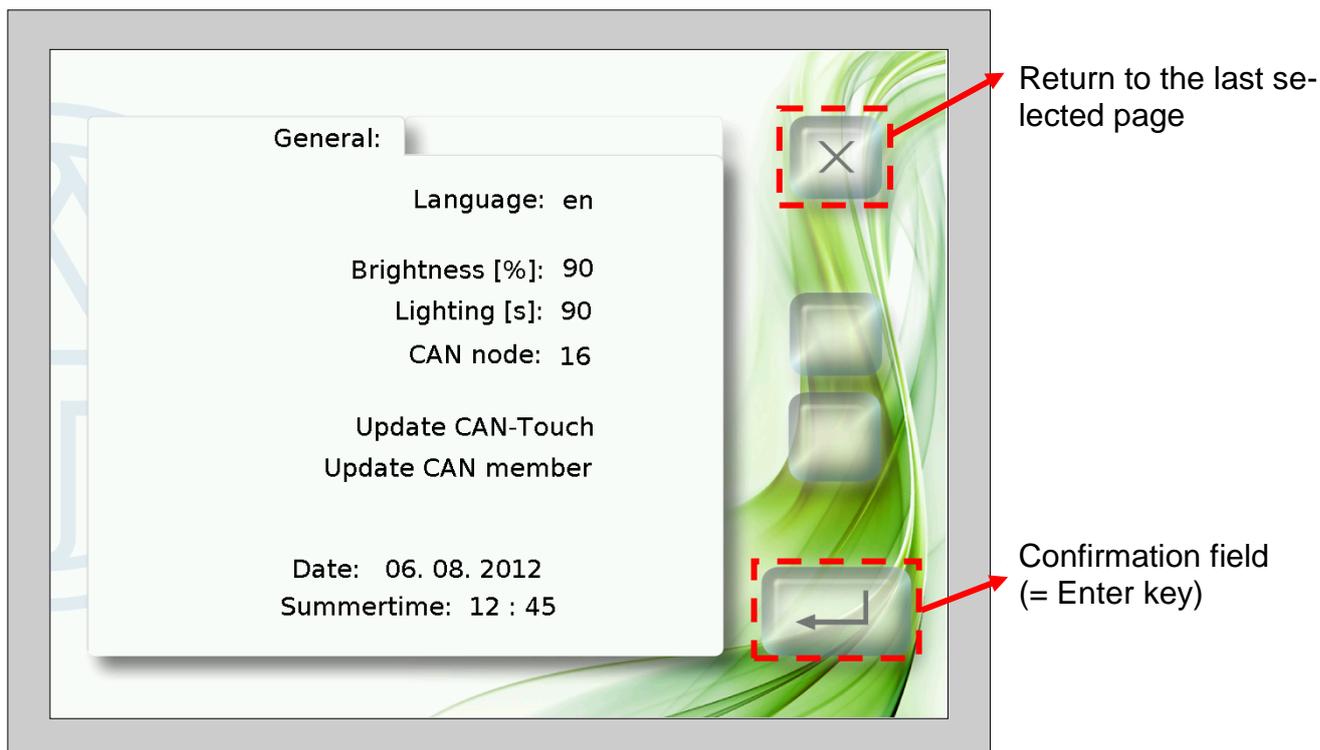
If a **warning triangle** has been programmed to be on the display page then it will stay visible as long as there are active messages.

Touching the warning triangles switches you to the page of the activated message.

If several messages are active then they are displayed consecutively.

"Settings" link page

Once the link is touched, the following page appears:



From this page, the following actions can be undertaken directly on the CAN-TOUCH:

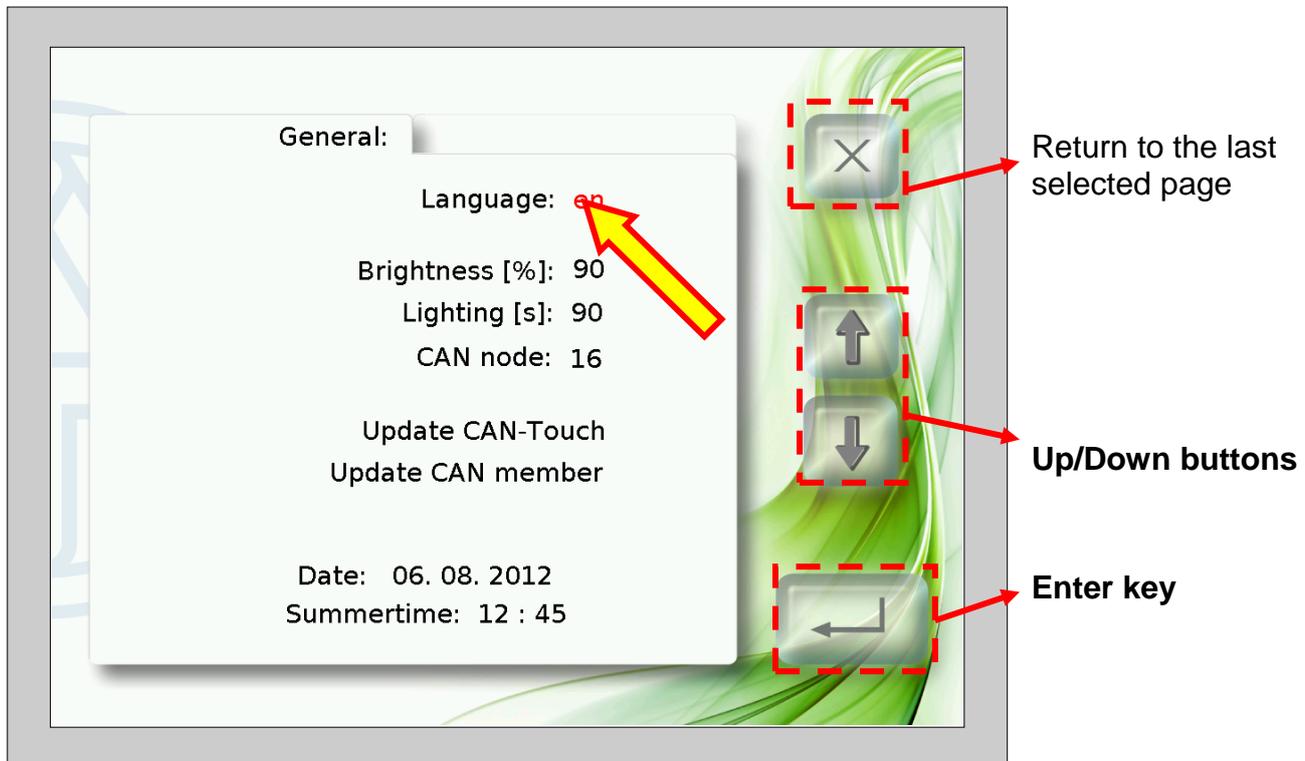
- Language change and optional programming change
- Brightness and switch-on period of the lighting
- Changing of the CAN node number of the CAN-TOUCH
- Update of the CAN-TOUCH operating system
- Download of function data from other CAN bus members (with the exception of BL-NET, C.M.I.)
- Upload of operating systems and/or function data to other CAN bus members (with the exception of BL-NET, C.M.I.)
- Changing of the system date and time

The individual menu items are described below.

Operation

Change language:

Touching the language abbreviation (e.g. **en**), causes the up/down arrows to appear and the font colour changes to red. Touching the corresponding arrow changes the value. If the Enter key is touched, the value is again displayed in black, the up/down arrows disappear and the Settings page language is changed.



Following this, the CAN-TOUCH reboots.

Language folders for language-related programming (*.raw-, settings- and messages files) can be created on the SD card. The folder names must include the language abbreviation (cs, de, en, es, fr, it or nl).

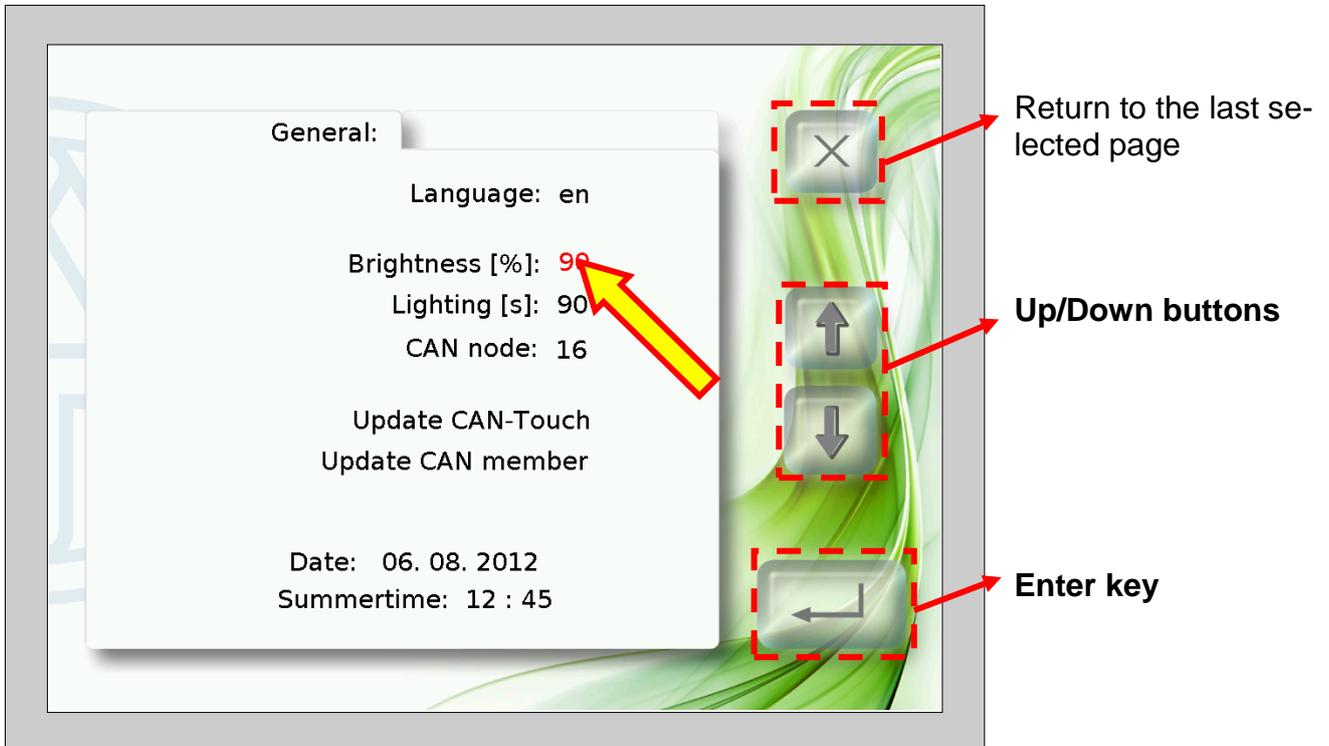
If a CAN-TOUCH programming was saved in the in the language folder of the selected language, this programming is loaded.

However, if no programming is saved in the language folder **or** no suitable language folder has been created, upon booting, the programming is loaded from the root directory.

Changing Brightness, Lighting, Date or Time.

After touching the fields for Language, Brightness, Lighting, Date or Time, the up/down arrows appear and the font colour of the value changes to red. Touching the corresponding arrow in the up/down button changes the value. If the Enter key is touched, the value is again displayed in black, the up/down arrows disappear.

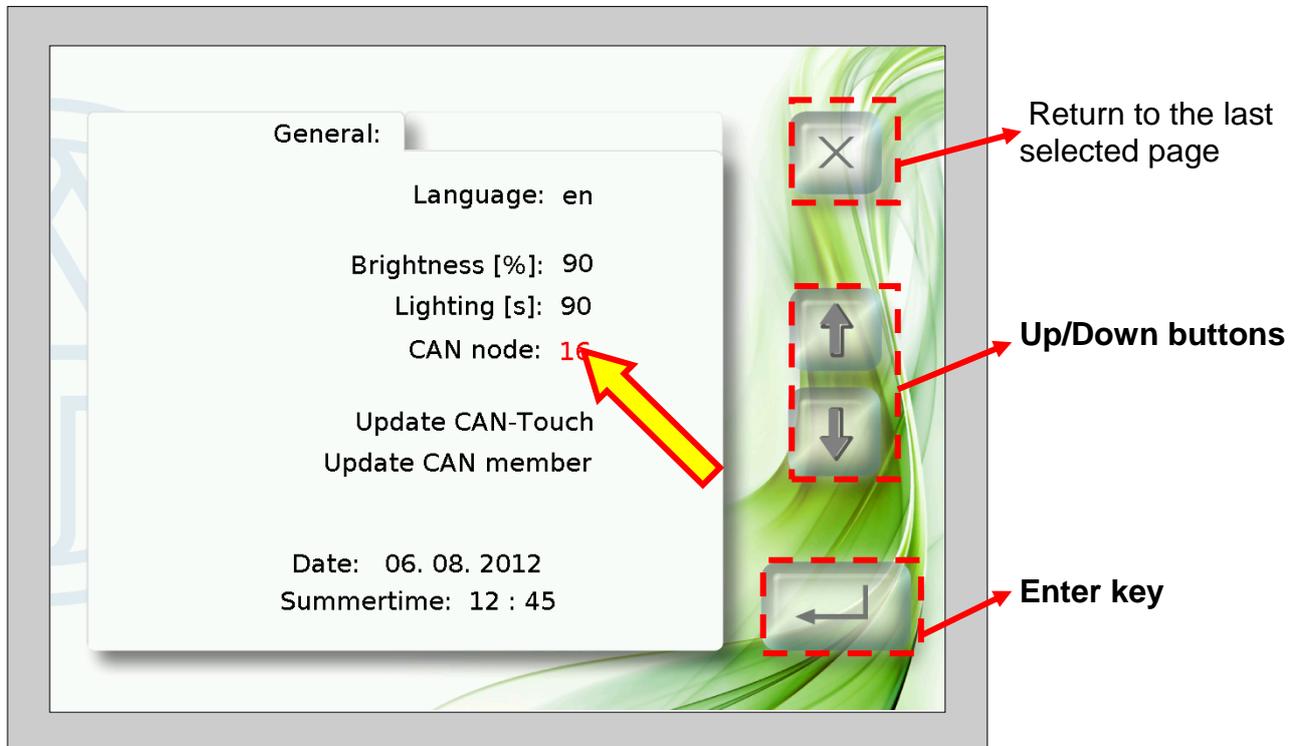
Example (changing the brightness):



Operation

Changing the CAN node

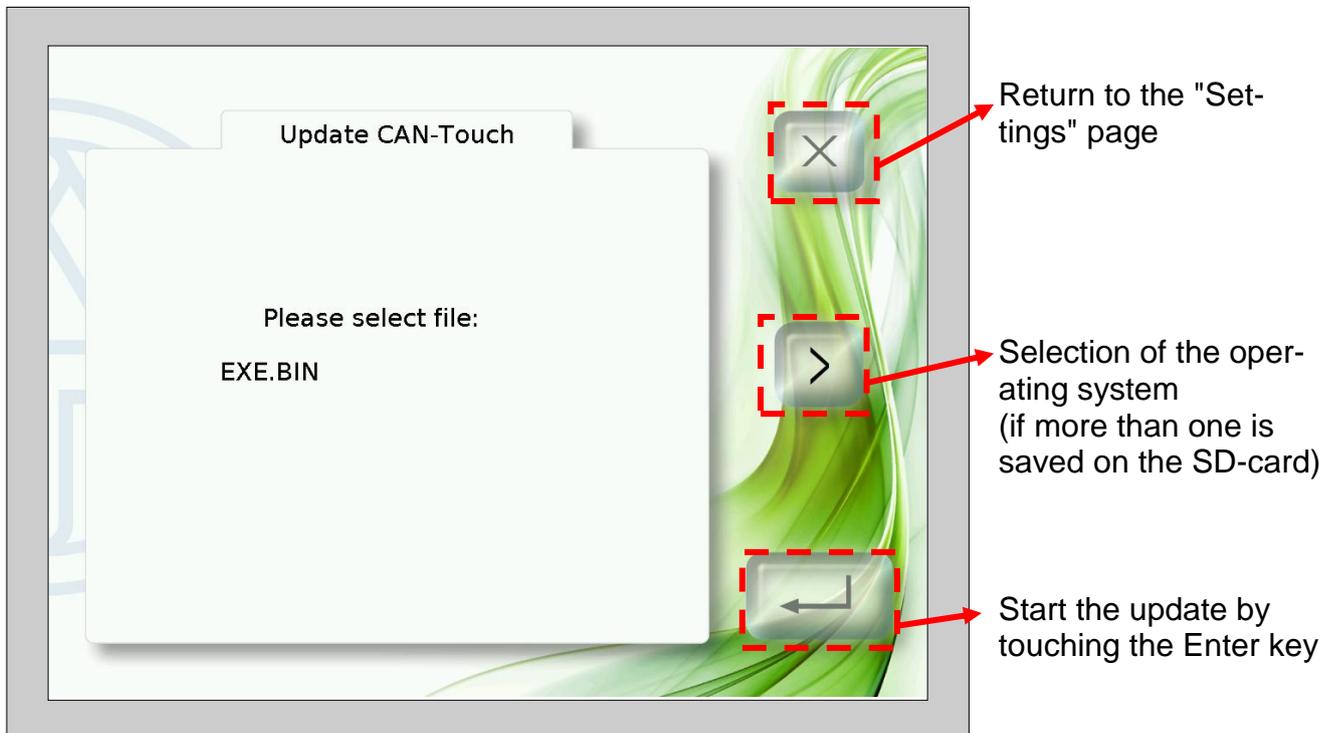
After touching the CAN node number, up/down arrows appear and the node number colour changes to red. Touching the corresponding arrow changes the value. If the Enter key is touched, the value is again displayed in black, the up/down arrows disappear. Touching the Enter key again boots the CAN-TOUCH and adopts the changed node number.



Update CAN-Touch

Touching the field "**Update CAN-Touch**" causes a new page to be displayed. From this page it is possible to update the CAN-TOUCH operating system.

Prior to this, the latest operating system must be downloaded from our home page www.ta.co.at and saved in the root directory of the SD-card. When using this method, the file name can be freely selected (*.bin).

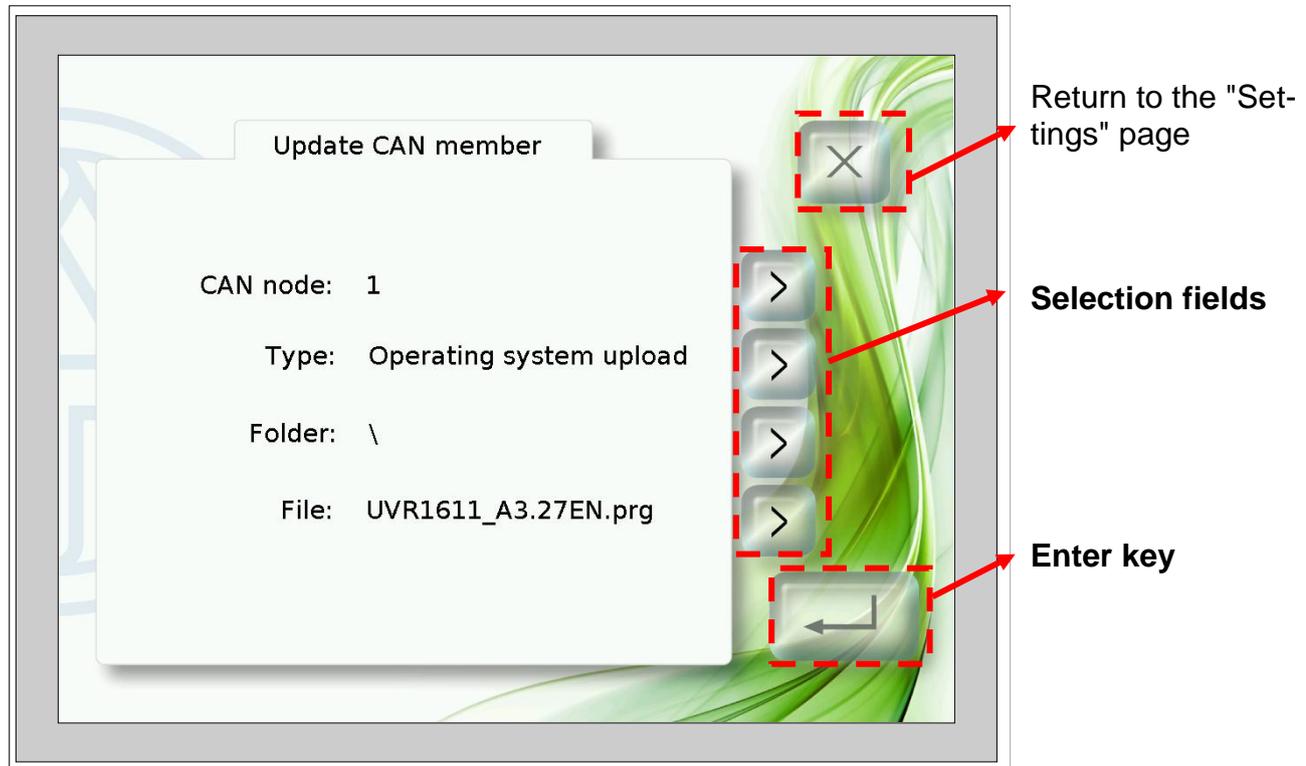


Operation

Update CAN member

Touching the field "**Update CAN-Touch**" causes a new page to be displayed.

From this page it is possible to update the operating systems and function data of **other** CAN bus members (with the exception of BL-NET, C.M.I.).



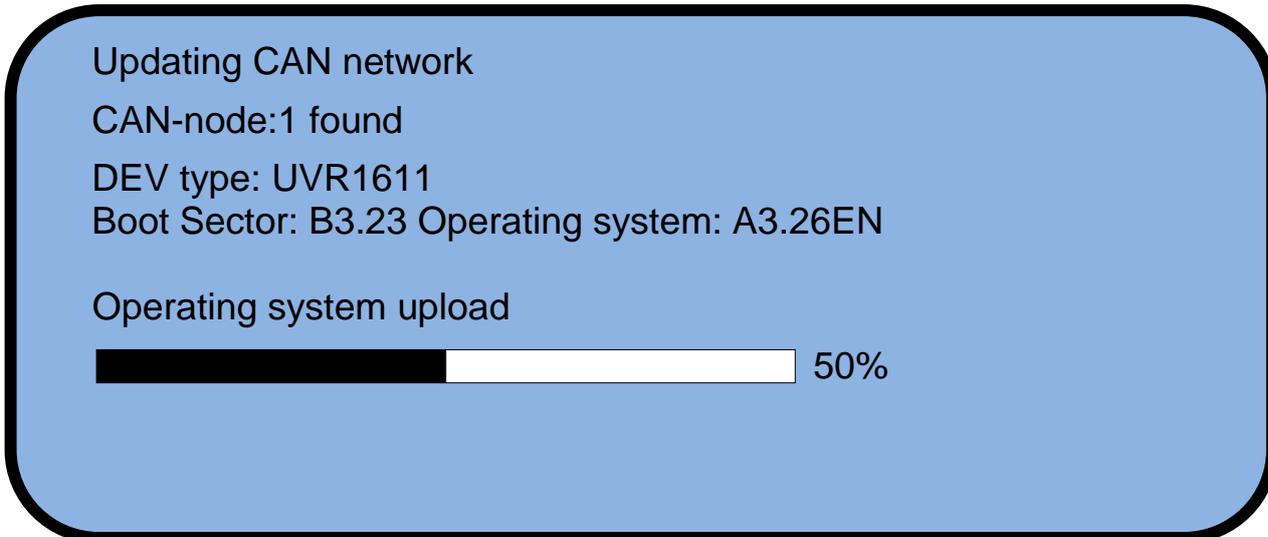
Prior to the start of the update, the necessary file must be loaded in the corresponding folder of the SD card:

- Operating systems (*.prg files) in the folder **prg**,
- Function data (*.dat files) in the folder **dat**.

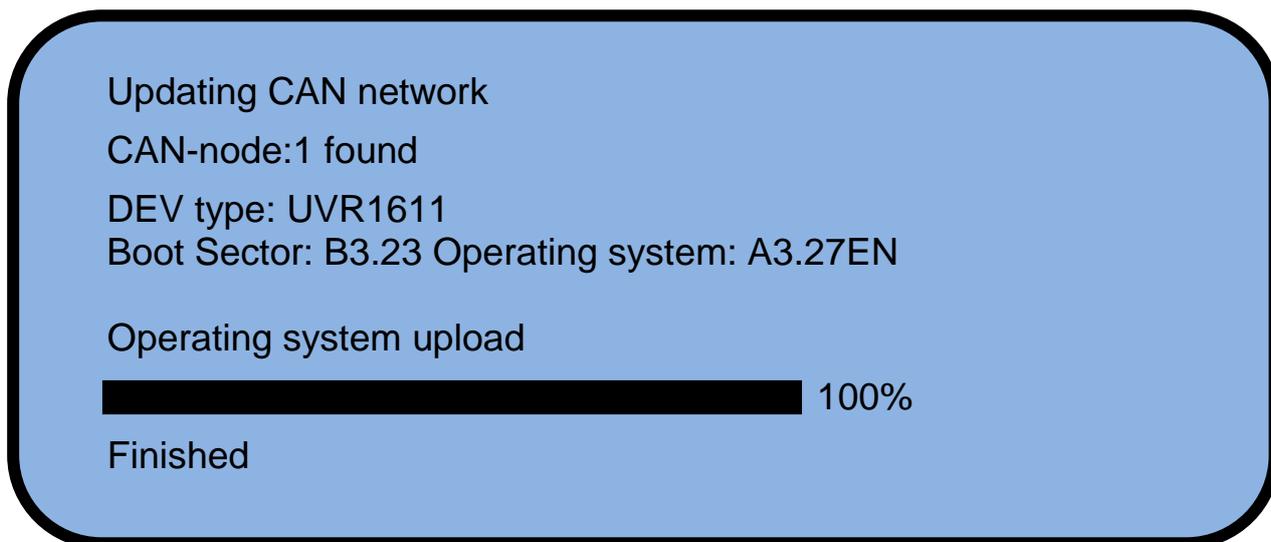
Using the selection keys, the following settings can be selected:

CAN node	Choice of the CAN node of the device that is to be updated. Only the node numbers of the connected devices are displayed.
Type	Selection options: Function data download (CAN node ⇌ SD-card) Function data upload (SD-card ⇌ CAN node) Operating system upload (SD-card ⇌ CAN node)
Folder	Indication of the folder in which the file for transfer has been saved. Sub folders (e.g. for each language) can be created within the folders dat and prg and selected there.
File	Download: Name of the created file Upload: Selection of the *.prg or *.dat file saved in this folder

After selection of the desired settings, the update is started by touching the Enter key. The following display is output to the screen (example: operating system update node 1, UVR1611, 50% already loaded):



Once the update is successfully completed, the following message is displayed:



Touching the CAN-TOUCH anywhere causes it to return to the Settings screen

EU Declaration of conformity

Document- Nr. / Date: TA17018 / 02/02/2017
Company / Manufacturer: Technische Alternative RT GmbH
Address: A- 3872 Amaliendorf, Langestraße 124

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product name: CAN-TOUCH, CAN-TOUCH/TFS
Product brand: Technische Alternative RT GmbH
Product description: CAN Touchscreen

The object of the declaration described above is in conformity with Directives:

2014/35/EU Low voltage standard
2014/30/EU Electromagnetic compatibility
2011/65/EU RoHS Restriction of the use of certain hazardous substances

Employed standards:

EN 60730-1: 2011 Automatic electrical controls for household and similar use –
Part 1: General requirements
EN 61000-6-3: 2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards -
+A1: 2011 Emission standard for residential, commercial and light-industrial envi-
+ AC2012 ronments
EN 61000-6-2: 2005 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards -
+ AC2005 Immunity for industrial environments
EN 50581: 2012 Technical documentation for the assessment of electrical and electronic
products with respect to the restriction of hazardous substances

Position of CE - label: On packaging, manual and type label



Issuer: Technische Alternative RT GmbH
A- 3872 Amaliendorf, Langestraße 124

This declaration is submitted by

A handwritten signature in black ink, appearing to read 'Schneider Andreas'.

Dipl.-Ing. Andreas Schneider, General manager,
02/02/2017

This declaration certifies the agreement with the named standards, contains however no warranty of characteristics.

The security advices of included product documents are to be considered.

Guarantee conditions

Note: The following guarantee conditions do not in anyway limit the legal right to a guarantee, rather expand your rights as a consumer.

1. The company Technische Alternative RT GmbH provides a two-year guarantee from the date of purchase by the end consumer for all the devices and parts which it sells. Defects must be reported immediately upon detection and within the guarantee period. Technical support knows the correct solution for nearly all problems. In this respect, contacting us immediately will help to avoid unnecessary expense or effort in troubleshooting.
2. The guarantee includes the free of charge repair (but not the cost of on site fault-finding, removal, refitting and shipping) of operational and material defects which impair operation. In the event that a repair is not, for reasons of cost, worthwhile according to the assessment of Technische Alternative, the goods will be replaced.
3. Not included is damage resulting from the effects of overvoltages or abnormal ambient conditions. Likewise, no guarantee liability can be accepted if the device defect is due to: transport damage for which we are not responsible, incorrect installation and assembly, incorrect use, non-observance of operating and installation instructions or incorrect maintenance.
4. The guarantee claim will expire if repairs or actions are carried out by persons who are not authorised to do so or have not been so authorised by us or if our devices are operated with spare, supplementary or accessory parts which are not considered to be original parts.
5. The defective parts must be sent to our factory with an enclosed copy of the proof of purchase and a precise description of the defect. Processing is accelerated if an RMA number is applied for via our home page www.ta.co.at. A prior clarification of the defect with our technical support is necessary.
6. Services provided under guarantee result neither in an extension of the guarantee period nor in a resetting of the guarantee period. The guarantee period for fitted parts ends with the guarantee period of the whole device.
7. Extended or other claims, especially those for compensation for damage other than to the device itself are, insofar as a liability is not legally required, excluded.

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