OnDuty
Configuration-Manual

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Digitalisiere Jetzt 42 GmbH
Configuration Manual OnDutySystem REV3
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How to Configure

The configuration of the complete System is done with the App, if you use a license other than the VAN license. When using the VAN license, you can only read values.

If you press and hold on an screen for more than 2 seconds, the configurable items appear for the current screen.

These items are shown with the edit symbol. 

All elements marked with this symbol can be controlled remotely with a physical switch via an input of OnDutyPower or OnDutyLight. When the state of the switch changes, the same action is performed that the element would perform if you operated it on the display. The first 4 button inputs of OnDutyPower 1& 2 and OnDutyLight 1-4 can be used for this purpose.

VAN License

The VAN License is specially build for a off the shelf solution for self builders and smaller Campers like VANs. All Functions are pre deployed and cannot be changed.

The first Relay is used for a PUMP and bound to one button, the 12V Button on the start page uses a Toggle on Voltage Output 3 (Relay) and XOR TAP on Voltage Output 1 & 2 (Bistable Relay).

For the VAN license, the first 2 tanks are available and their visibility is controlled by a input-bridging of the first Button Input. By default, the VAN license expects Votronik 10-50k sensors. If you use BEP TS1 with the tank adapter, you should input-bridge button input 2. The min and max levels are pre-filled.

If you want to use more features, you can upgrade at any time to a higher license with a firmware upgrade.

Feature Matrix

	Compact Edition				Core
	VAN Edition	Camper Edition	Camper Enhanced	Camper Black	Core STD Edition
Temperaturezones	1	1	1	3	3
OnDutyBus support	X	X	X	X	X
VE-BUS (MK)	X	X	X	X	X
VE.Direct ports	2	3	4	4	4
CAN-Bus support	0	0	0	X	X
RS485 support	0	0	0	X	X
Tank inputs	2	2	3	4	4
Gas tank intput	0	0	X	X	X
S0-input	0	0	0	1	1
Temperaturesensor ports	2	2	4	6	6
Manual heater	0	0	0	X	X
Number of rooms	0	2	4	6	6
Relais functions	1	2	2	2	-
Relais functions pre-assigned	1	-	-	-	-
APP read-only	X	X	X	X	X
APP write / configure	0	X	X	X	X

Basics

The OnDuty System is a modular system and can contain up to 8 OnDutyLight and 8 OnDutyPower.

OnDutyPower and OnDutyLight with the ID 0-4 must be connected to the primary OnDutyBus interface of the main unit, whereas the Units with a higher ID must be connected to the secondary OnDutyBus interface.

For the purpose of storing information in the system, we also created 8 VirtualBoxes. These Boxes are no physical Boxes. They are used for example in timer functions on output elements to hold the current value.

Each VirtualBox has 8 Outputs. If you want to set up multiple timer functions, you must use a separate VirtualBox Output per Timer.

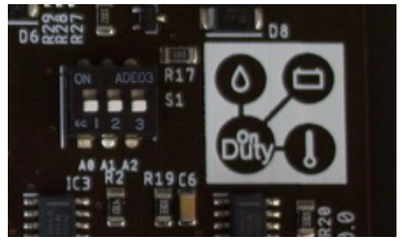
The system uses the VirtualBox 8 for internal values. This box must not be used for custom functions.

For special applications, a so called „manual heater“ can be used. This is a combination of an OnDutyLight and an OnDutyPower, both with ID0 but on the Secondary OnDutyBus connection of the main unit. This „manual heater“ is used to establish a 3 Zone heating system with a manual controlled heating system or a electric floor heating system.

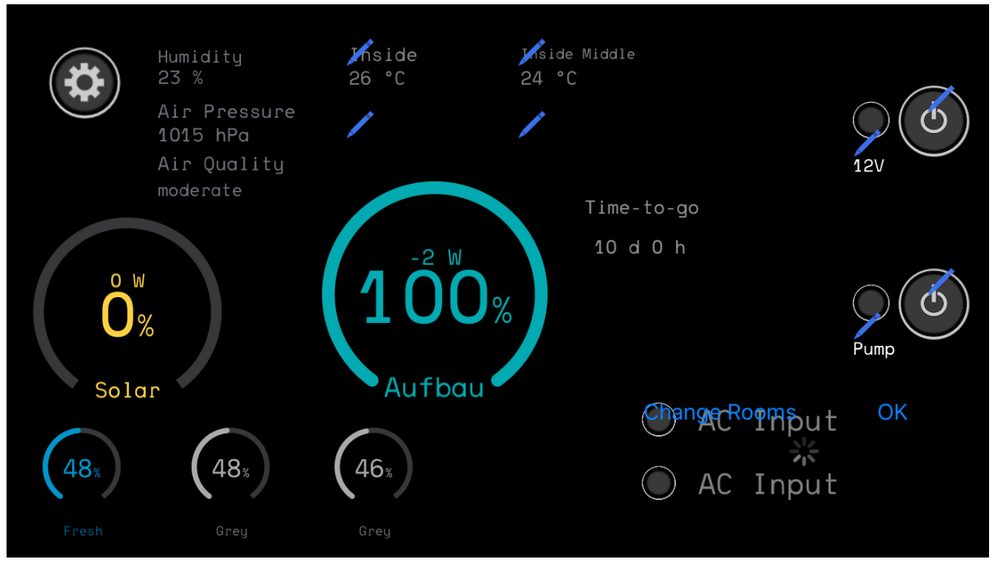
Setting the ID

The ID of each OnDutyLight or OnDutyPower can be set by an internal DIP Switch inside each Unit. In all units, the ID is binary coded. To set the right ID, open the Unit, pull out the PCB and hold it in your hands to see the OnDuty Logo in the right direction. The 3 DIP Switches have the value of 1, 2, 4 in decimal from left to right.

ID	LEFT	MIDDLE	RIGHT
0 (NO 1)	DOWN	DOWN	DOWN
1 (NO 2)	UP	DOWN	DOWN
2 (NO 3)	DOWN	UP	DOWN
3 (NO 4)	UP	UP	DOWN
4 (NO 5)	DOWN	DOWN	UP
5 (NO 6)	UP	DOWN	UP
6 (NO 7)	DOWN	UP	UP
7 (NO 8)	UP	UP	UP



Modern Homepage



You can configure 3 Buttons if you configured a room count of 0, or two buttons with a higher room count, because the button to get into the rooms will take the middle position of the button position.

Depending on the License of your Unit, the configurable Items are limited

Full and Camper Black : 4 Temperature labels and 6 rooms

Camper Enhanced: 4 Temperature labels and 4 rooms

Camper Edition : 2 Temperature labels and 2 rooms

Some elements of the screen are only available if the corresponding device is available.

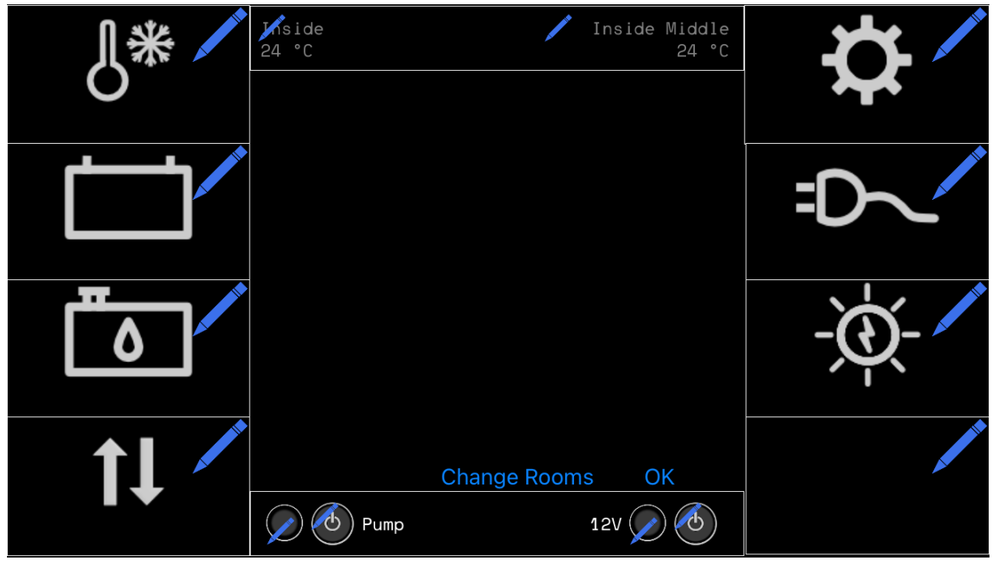
The solar gauge will only be visible if a solar charger is available.

The battery gauge will show up if a battery monitor or a direct coupled battery is available.

The air quality relies on the availability of an OnDutyAir and the AC controls on a Multiplus/Quattro or an inverter.

The tanks will be visible as soon as a label to the tank is set. Even with no connected sensor, the tank will show a value.

Classic Homepage

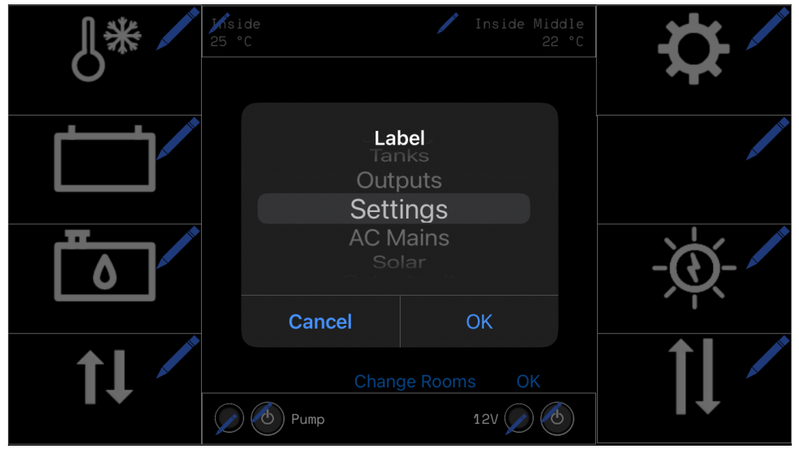


The Classic Start page consist of 8 configurable side buttons that lead to the related subpages. The position of the side buttons is free of choice.

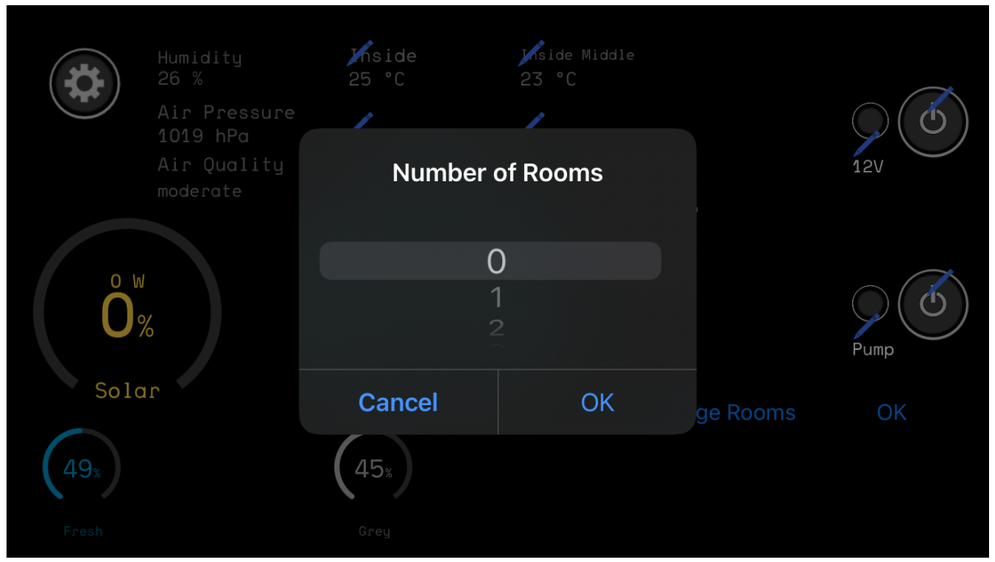
Choose which Button should be where by setting the labels. (See below)

For available side Buttons, see Appendix I.

You can setup 2 Buttons and 2 Temperature labels. For the available Temperature Label see Appendix A.



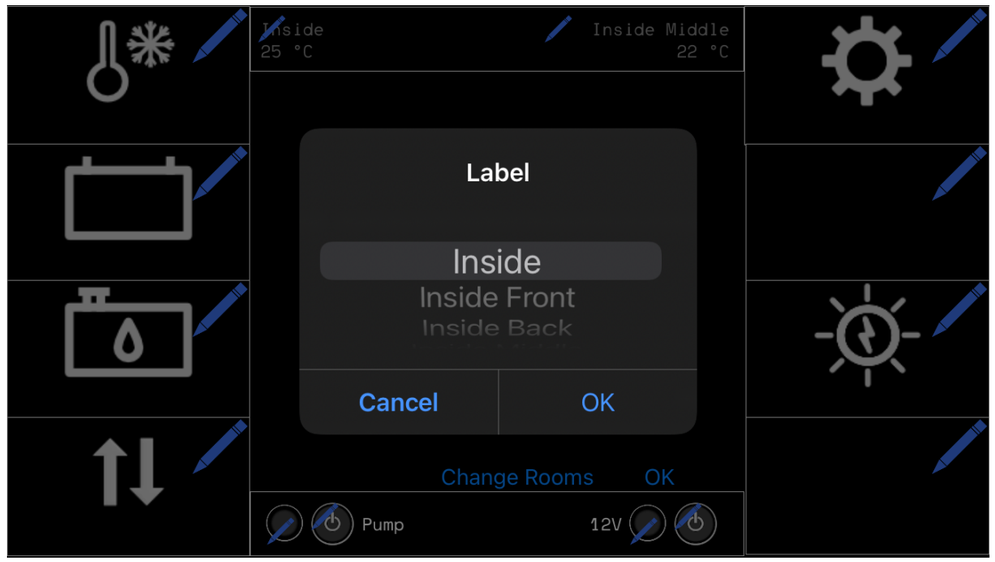
Room Count



Select how many rooms you would like to use by clicking the “Change rooms” button. The rooms page will automatically show the best presentation of the rooms depending on the count.

If you choose to have only one room, the button on the start page will directly lead to the output page with no room selection. In this case, we will not display a room name on the output page top.

Temperature labels



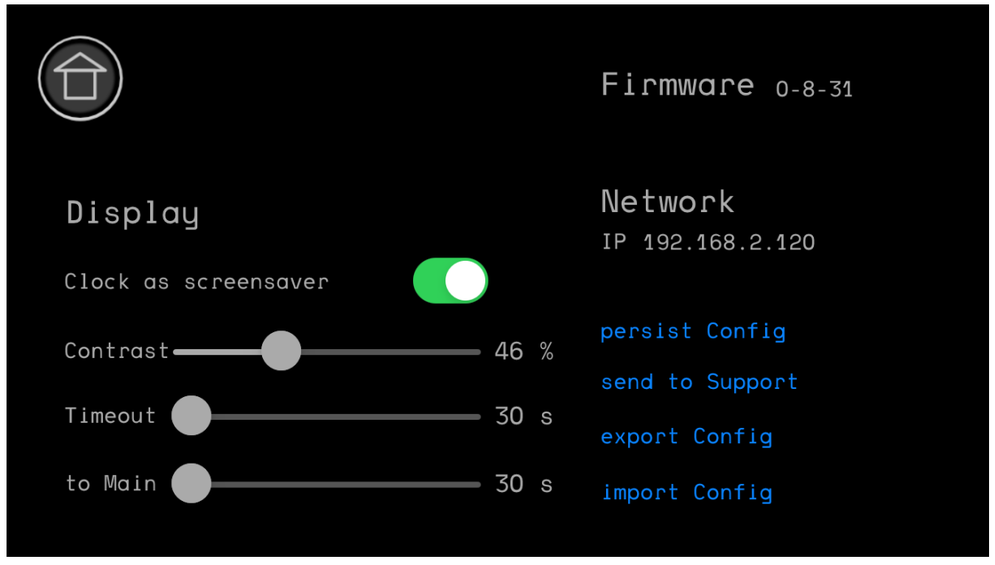
You can select a temperature label selection from the predefined list in Appendix A .

On the classic start page the left temperature label can only take the first 3 options from the label list.

On the Classic start page the two possible temperatures are bound to Temperature Inputs 1 & 2.

In the modern start page, the left item in the first row of the Temperatures can take the first 3 labels, the other three can use any of the labels. The four shown temperatures are bound to the Temperature Inputs 1-4.

The Temperature and the configured label will in any case just show up, if the matching temperature sensor is connected and working.



For all Versions other than the VAN license, you can import a configuration from the local smartphone or tablet if you clicked the “export Config” button before to save the current config.

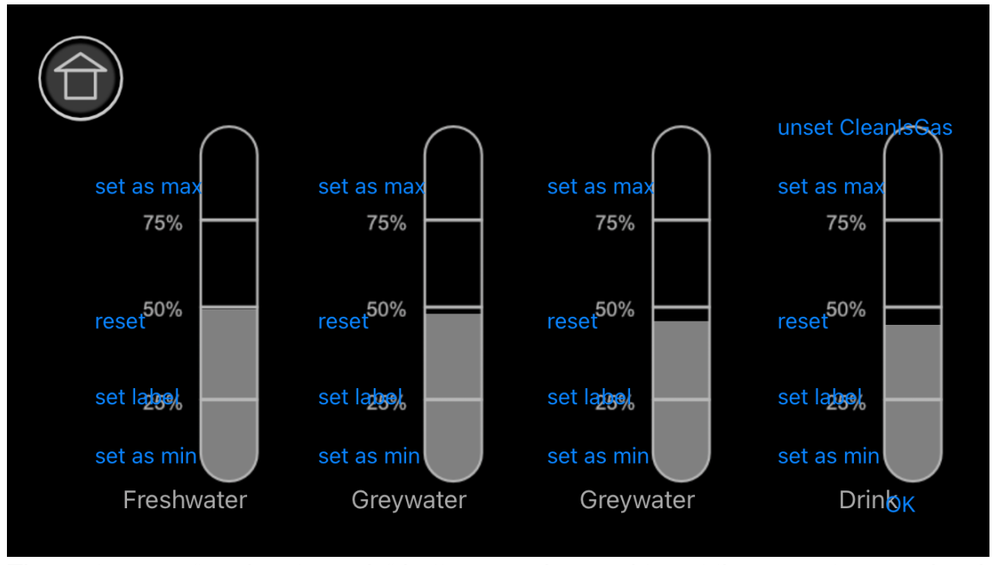
After any configuration, you should always wait at least 30 minutes before rebooting the unit to be sure the configuration is fully persisted. If you will have to reboot it earlier, you can persist the configuration by clicking the „persist config“ button.

The „send to support“ option sends the current configuration to Digitalisiere Jetzt 42 GmbH for support, if your controlling device has internet access. All information will be send to us encrypted and our servers are located in Germany. We will use the information exclusively for your support.

If you disable the „clock as screensaver“ option, the screensaver will be just a black screen.

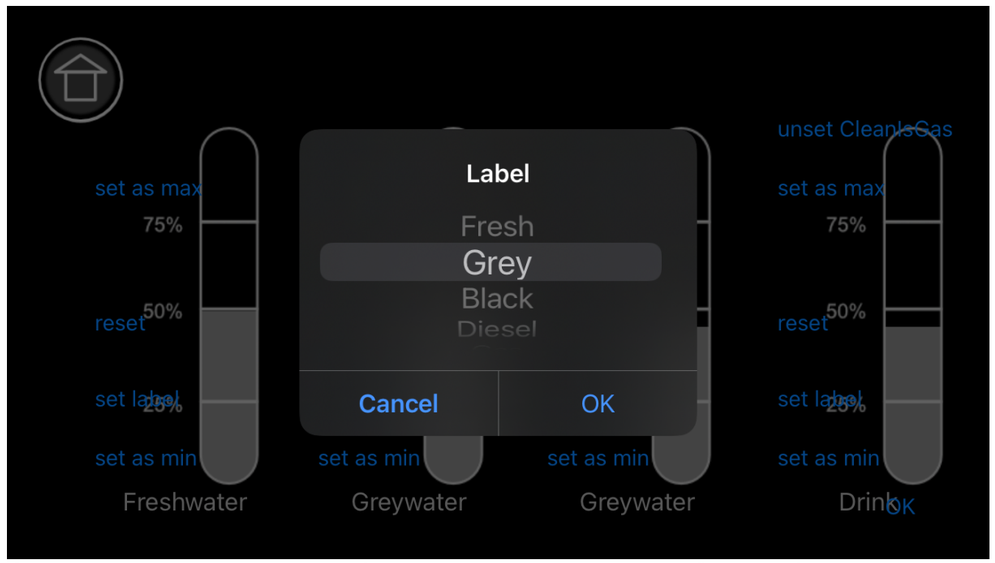
All time base setting like the timezone and the format (24h/12h) will always be automatically deployed to the unit based on the device settings of the smartphone or tablet you use. There is no automatic daylight saving in the Unit. The time will be corrected on the next connection with the app.

The „to Main“ setting defines how many seconds the system waits until it sends the Display to the main screen if no activity occurs anymore.



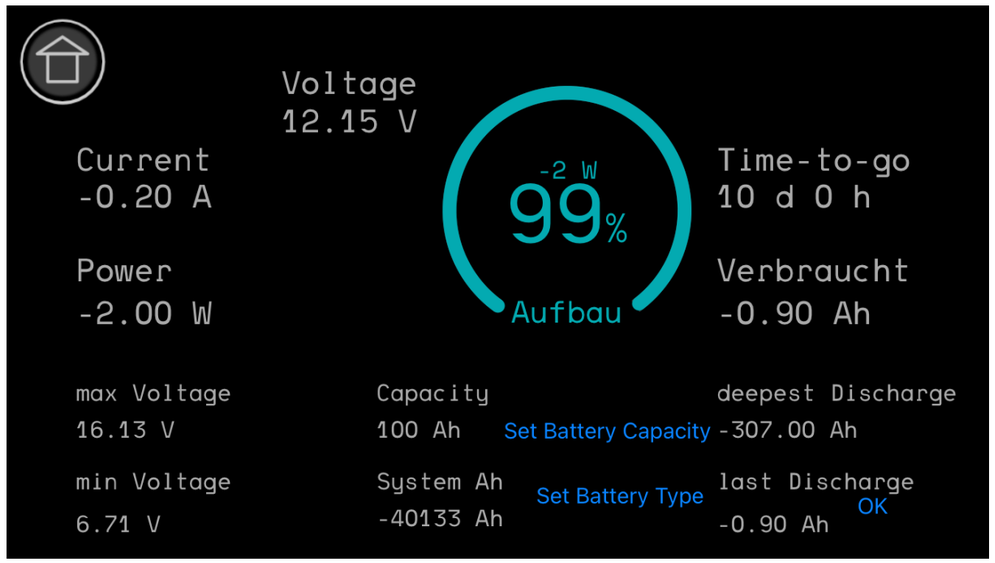
The „set as max“ and „set as min“ buttons can be used to set the current sensor level as 0% or 100%. The reset button deletes these set points.

If you want to use the Cleanwater Input as a Input for Propane or Diesel, you can use the „CleanIsGas“ button.



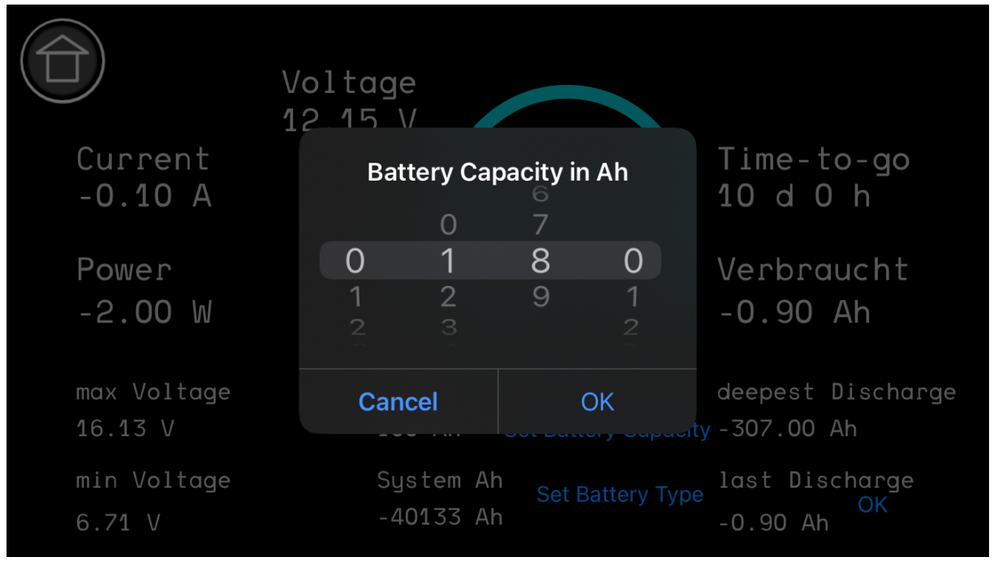
Choose a label (Appendix B) after you clicked the “set Label” button for each tank element to make it show up. If no label is configured, the tank element will be hidden.

Battery Settings

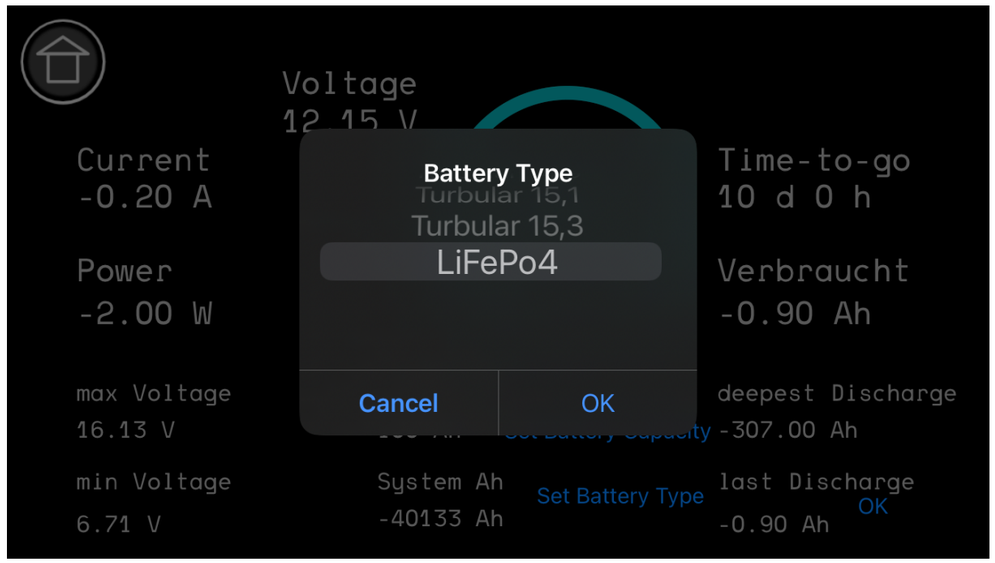


On the battery detail page, you have the ability to set the battery capacity and the Battery type.

For the VAN license, the battery type is fixed to LiFePo4 and the battery capacity will always be read from the battery monitor or battery.



Set your battery Capacity in Ah. This is for future use and has no effect as of today.



Set your battery type from the list.

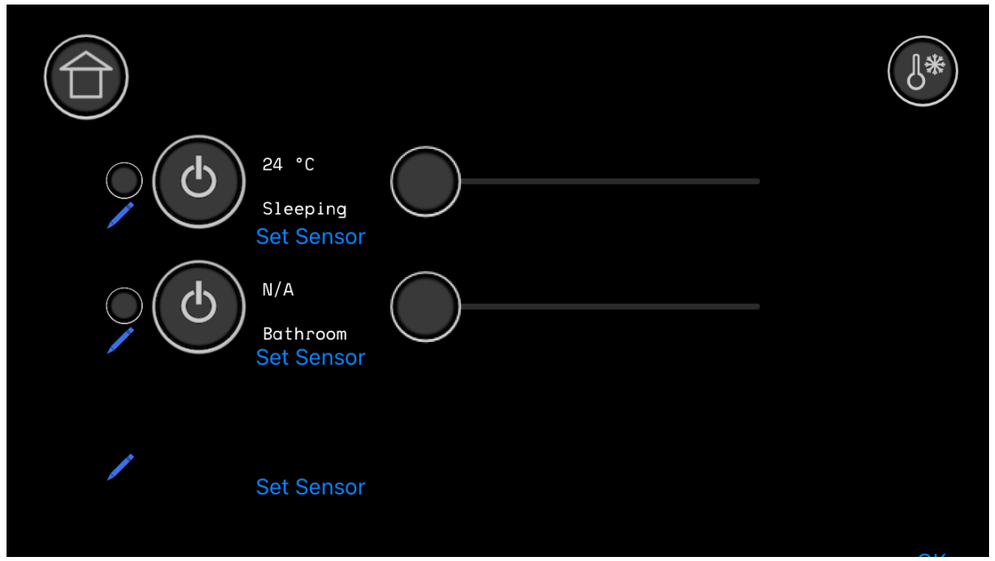
This battery type is used to calculate the SOC depending on the „Real SOC“ setting in the Display settings. If „use real SOC“ is set, we will recalculate the read SOC value from a Battery monitor or Battery, to match the displayed 0% to the minimum SOC value for the corresponding battery type.

For all Battery types other than LiFePo4, the minimum value of 50% is used, for LiFePo4 20% is used.

As a result, for e.g. LiFePo4, the Display will show 5% SOC if the LiFePo4 battery states 24% and 0% if the battery is at 20% SOC.

In short words, the display shows the remaining dischargeable capacity in %.

Climate Zones

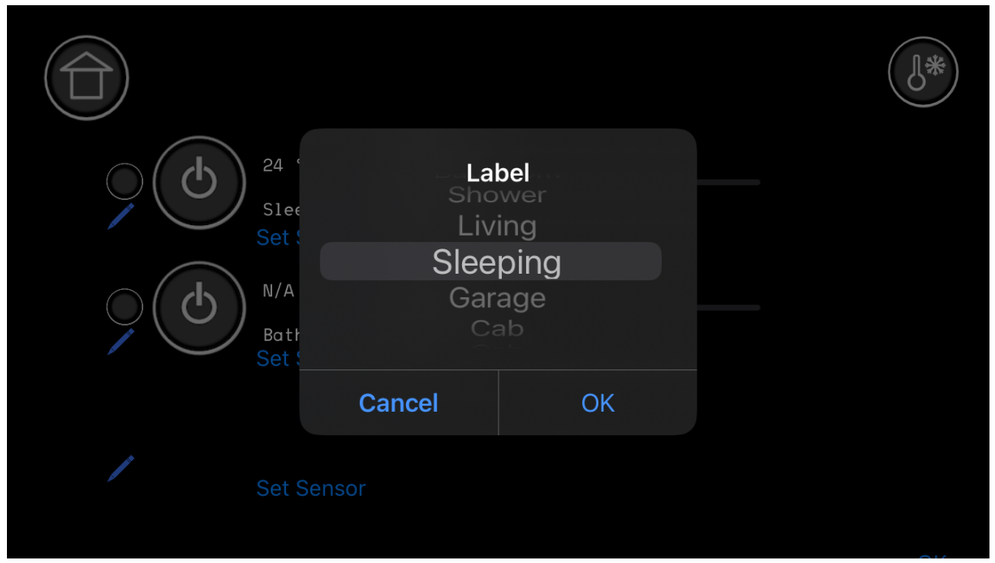


For VAN license the first Zone is bound to Temperature Sensor 1.

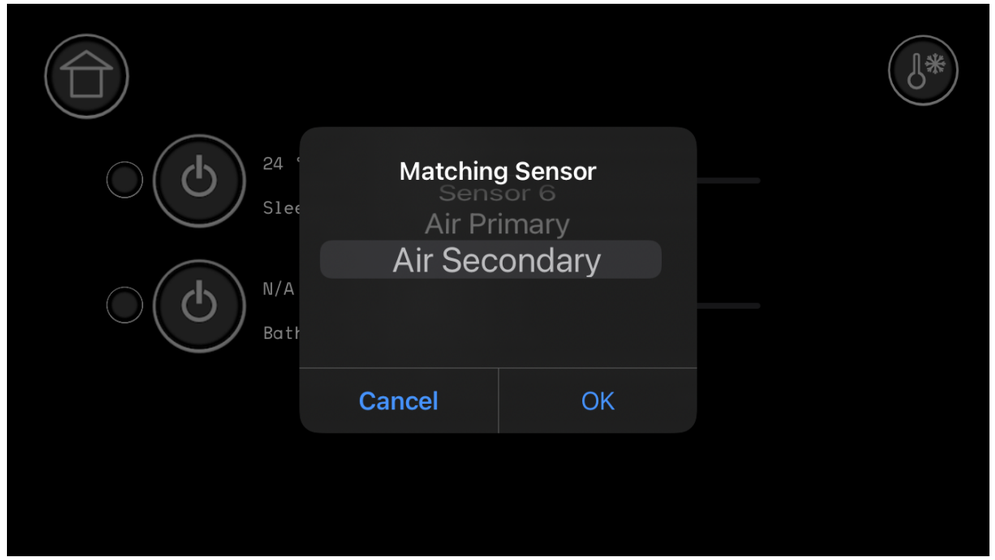
The Camper and Camper Enhanced License can configure the Temperature Sensor for the Zone and set a label for the Zone.

Starting with the Camper Black Edition, all 3 Zones can be configured.

No matter what heating or air-conditioning system is used, a temperature sensor got to be bound to a zone. If no temperature sensor is bound, the zone will not be operational.

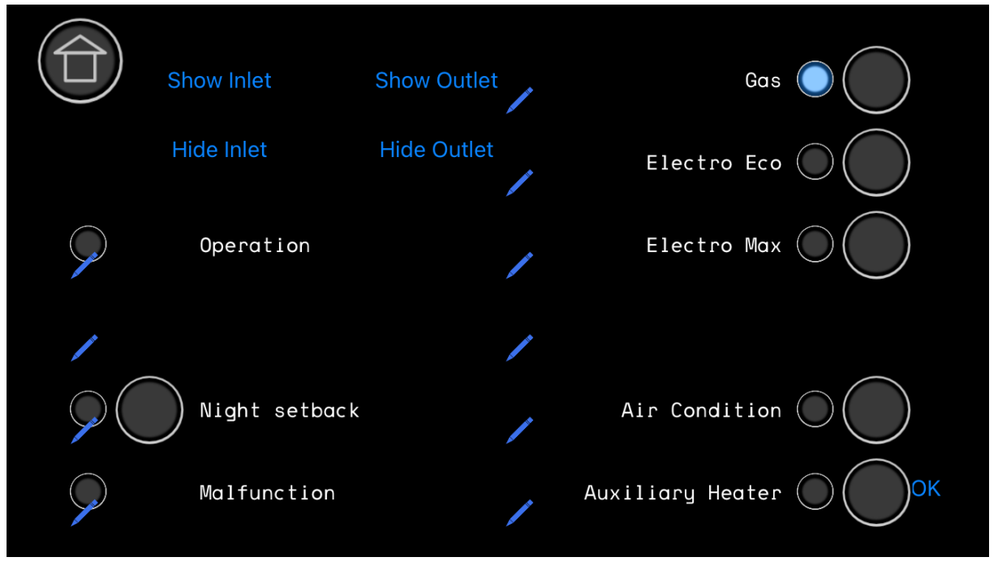


Set a zone label from the list of the rooms (Appendix E)



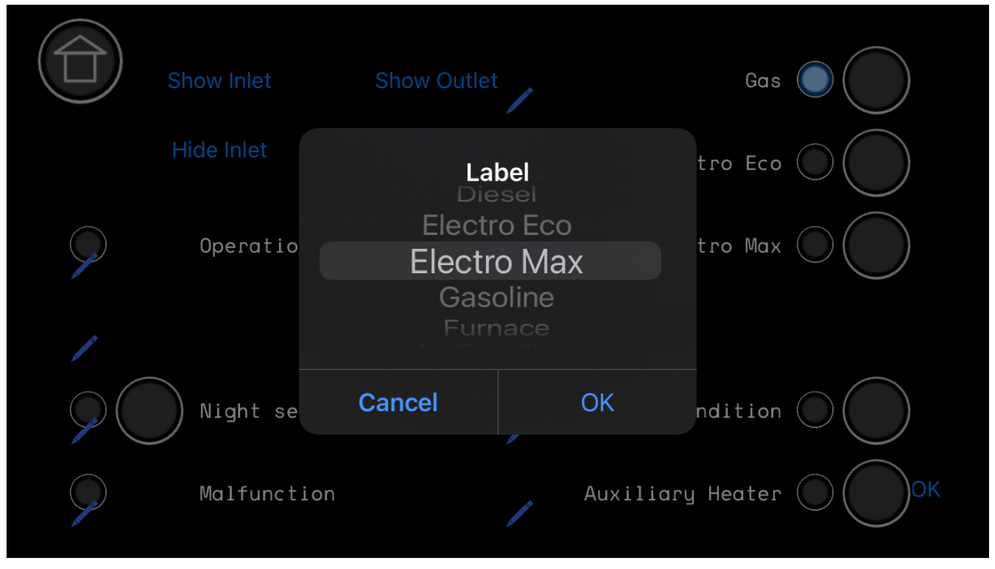
Select a temperature sensor from the list to be bound to the zone display after clicking on the “set Sensor” button on a zone element. If you use a “manual heater “control, the sensor is fixed and will be used for the regulation.

Climate Device Selection



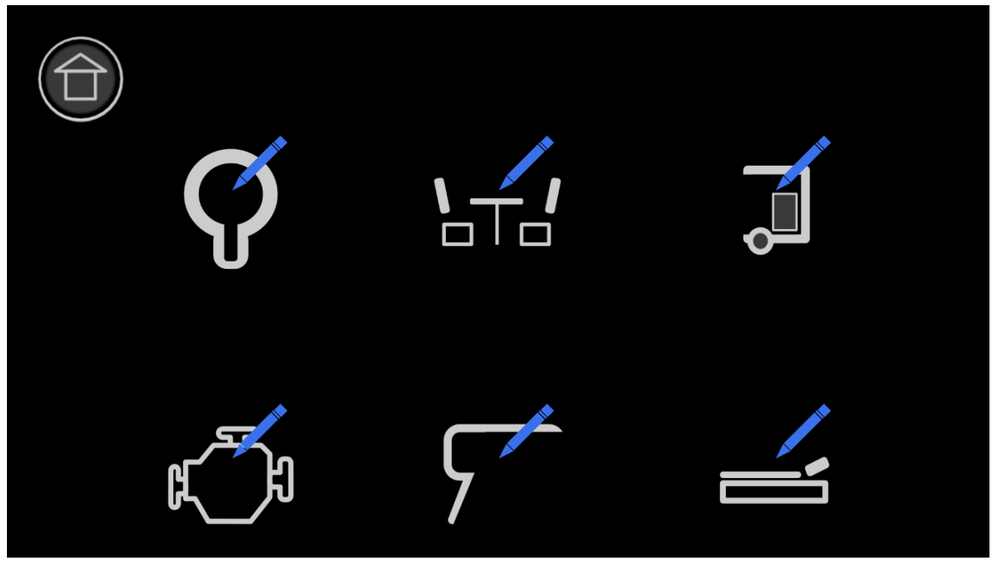
You can configure up to 10 control buttons by setting their labels. (See below)

If you click the „show inlet“ button, we will display the value of the 5th temperature sensor , if you click „show outlet“, we will show additionally the temperature sensor value of sensor input 6 .



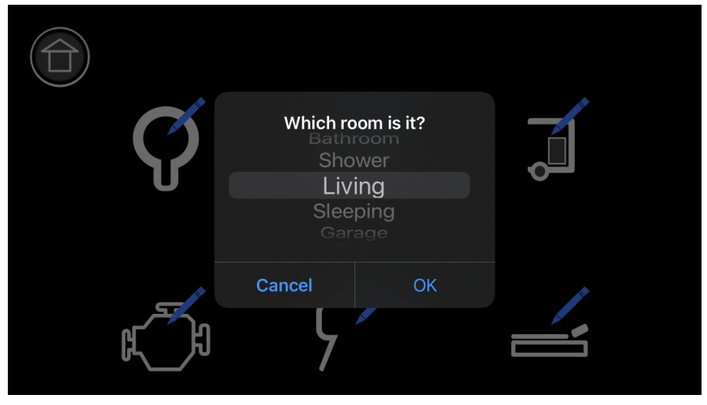
See the list of available buttons and bound functions in Appendix H.

Rooms



Depending on the number of selected Rooms in the start page, you will see 2, 4 or 6 positions of configurable rooms. These rooms are a collection of different controls in a single view.

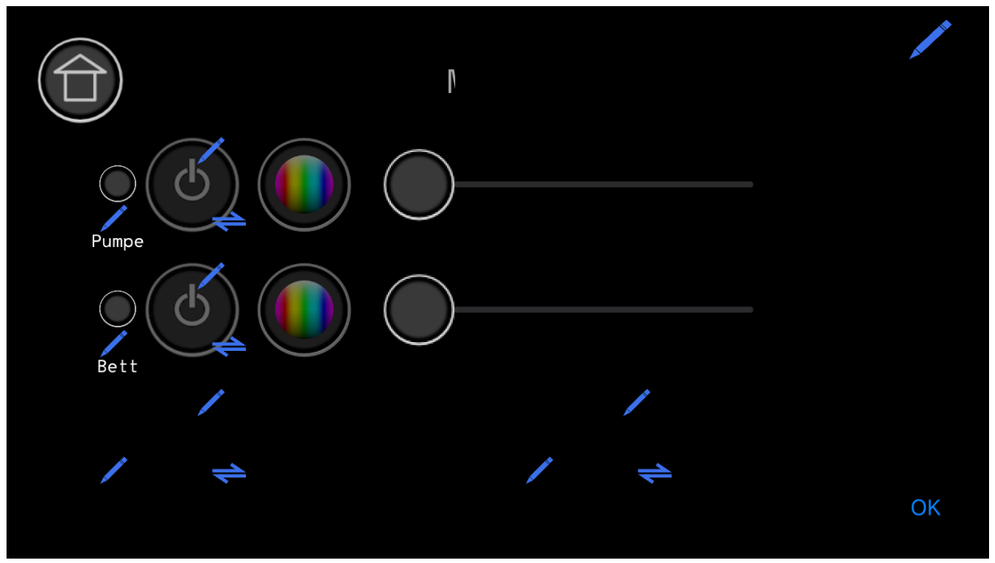
Each room has three rows of input element which each can be a maximum of two switching buttons or a single light control.



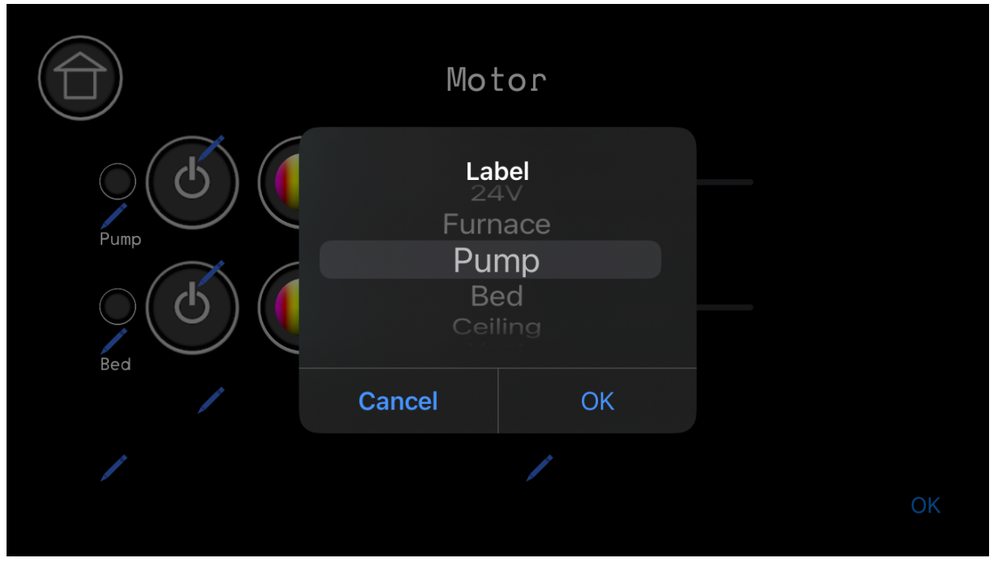
Choose a room from the predefined list (Appendix E).

The Icon is bound to a room label and will be displayed after the selection.

Light Controls in Rooms



Each Room can have a maximum of 3 Light control elements. Starting from display version V10006, a temperature can be selected for display in the room via the configuration.



Select a label for the light control element from the predefined list (Appendix D).

Light Controls Example

This is an example for the light control of a RGBW LED Light stripe. The R channel is connected to Light 1 Output 1, the G channel is connected to Light 1 Output 2, the B channel to Light 1 Output 3 and the W channel to Light 1 Output 4.

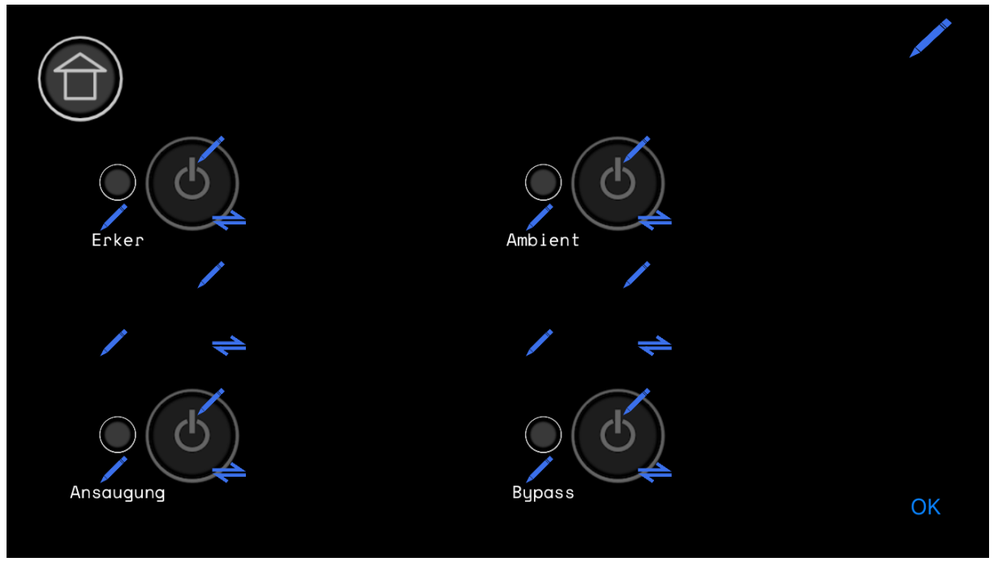
The State of the status LED in the Display will be automatically calculated on the channels dimming states.

Choose the corresponding OnDutyLight or Compact Edition outputs.

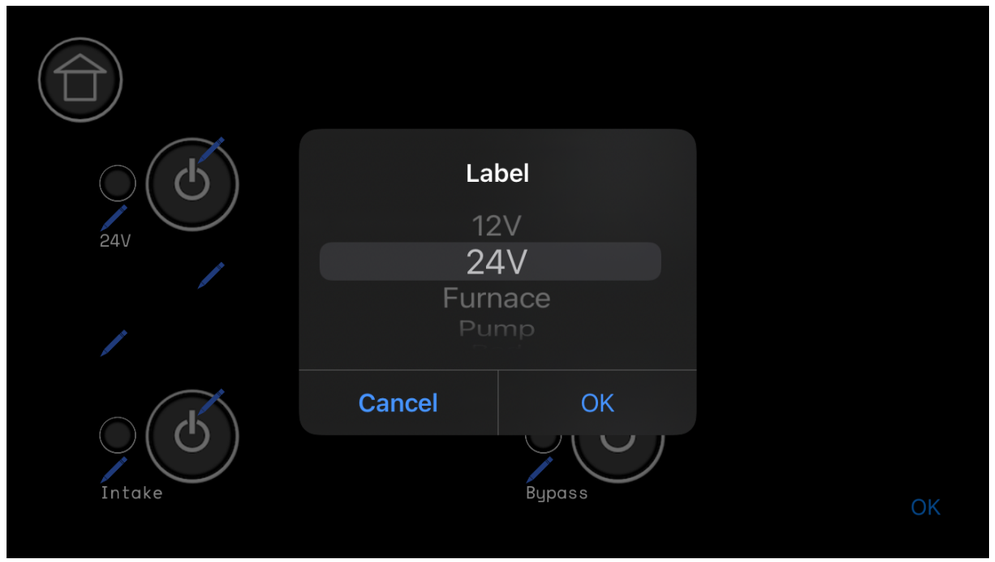
If you configure a Compact Edition, the integrated light outputs are configured as Light1.

Depending on the selected light control, the number of configurable outputs vary. See Appendix F for the list of light controls and their functions.

Output Controls in Rooms

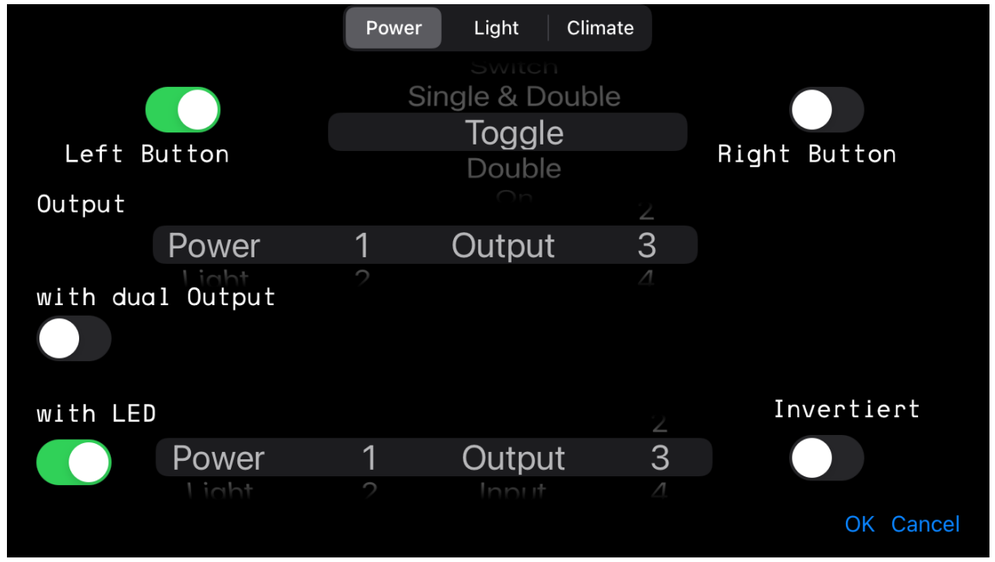


Each Room can have a maximum of 6 output control elements. Starting from display version V10006, a temperature can be selected for display in the room via the configuration.



Select a label for the output control element from the predefined list (Appendix D).

Output Controls Example



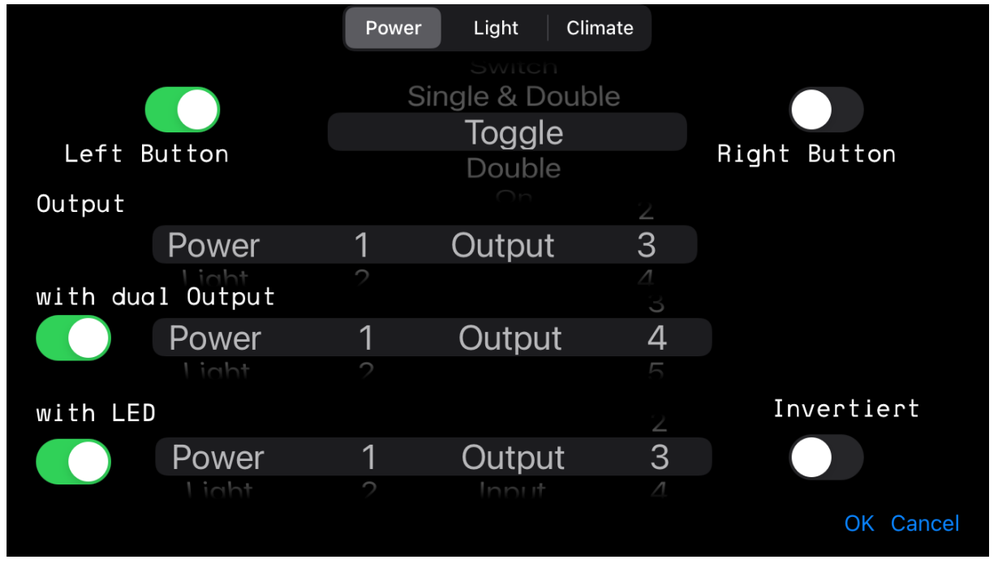
This is an example for a simple button control with one button and a state led, which toggles an Output (OnDutyPower 1 Relay 1) and shows the led state read from the same output.

Choose the corresponding OnDutyPower, OnDutyLight or Compact Edition outputs.

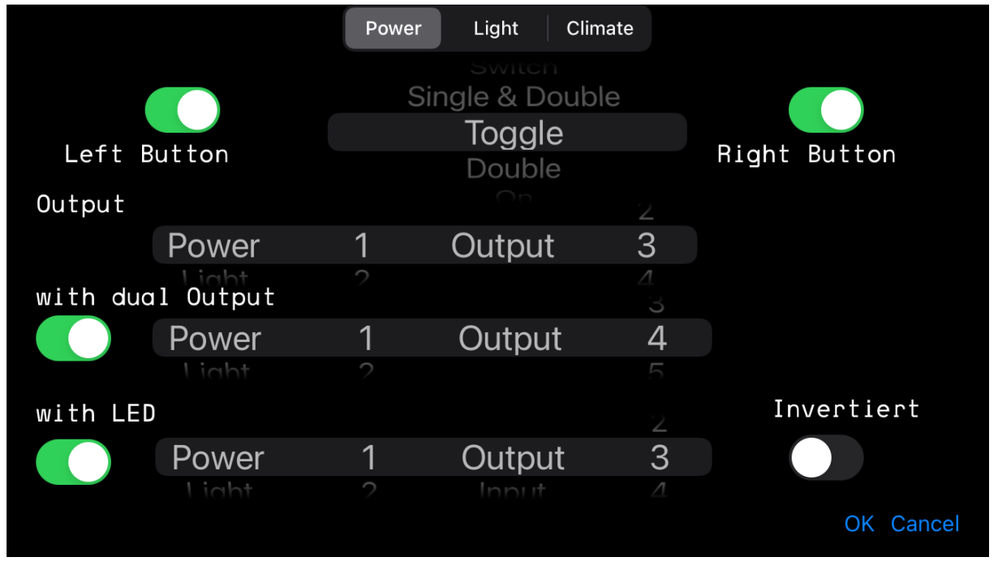
If you configure a Compact Edition, the integrated light outputs are configured as Light 1, the integrated voltage and Relay outputs as Power 1.

For OnDutyPower, the first 4 Outputs are the Relay Outputs, outputs 5-8 are the electronic switch outputs.

For the Compact Edition, output 1&2 are the relays, output 5-8 are the voltage outputs.



This is an example for a simple button control with one button and a state led, which toggles two Outputs (OnDutyPower 1 Relay 1 & Relay 2) and shows the led state read from the first configured output (Relay 1).



For some output controls, a secondary button is needed, which can be enabled with the „right button“ switch.

For a list of available output control elements and their functions and requirements see Appendix G.

Appendix A - Temperature Labels

English	German
Inside	Innen
Inside Front	Innen Vorne
Inside Back	Innen Hinten
Inside Middle	Innen Mitte
Outside	Aussen
Sleeping	Schlafen
Living	Wohnen
Inlet	Vorlauf
Return	Rücklauf
Freezer	Tiefkühler
Fridge	Kühlschrank
Garage	Garage
Cab	Fahrerhaus
Bath	Bad
Tank	Tank
Storage	Staufach
Boiler	Boiler
Cabover	Alkoven

Appendix B - Tank Labels

On modern start page

English	German
Fresh	Frisch
Grey	Grau
Black	Schwarz
Diesel	Diesel
Gas	Benzin
Propane	Propan
Drink	Trink
Gas	Gas
Clean	Clean
Toilet	WC

Appendix C - Tank Labels long

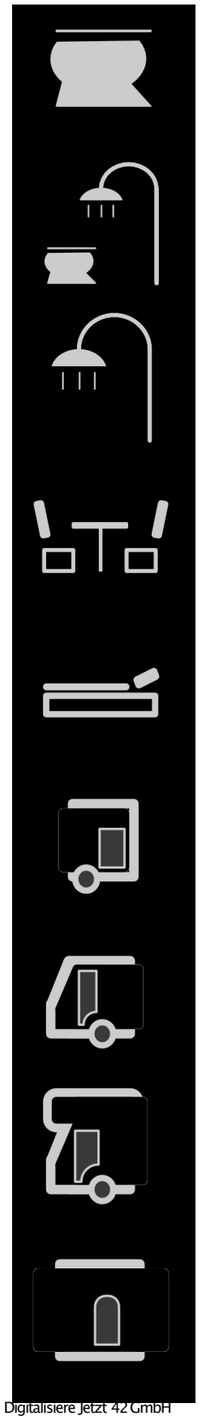
English	German
Freshwater	Frischwasser
Greywater	Grauwasser
Blackwater	Schwarz
Diesel	Diesel
Gas	Benzin
Propane	Propan
Drink	Trinkwasser
Gas	Gas
Cleanwater	Clean
Toilettank	Toilettentank

Appendix D - Button Labels

English	German
12V	12V
24V	24V
Furnace	Heizung
Pump	Pumpe
Bed	Bett
Ceiling	Decke
Vent	Lüfter
Compressor	Kompressor
Roof	Hubdach
Ambient	Ambient
Mirror	Spiegel
Lock	Verriegelung
Dinette	Dinette
Cabinet	Vitrine
Cabover	Alkoven
Wall unit	Oberschrank
Door	Türe
Central	Zentral
UV	UV
Light	Licht
Outside	Außen
Awning	Markise
USB	USB

English	German
Intake	Ansaugung
Booster	Booster
Slide out	Erker
Router	Router
Motion	Bewegung
Boiler	Boiler
Bypass	Bypass
Entrance	Eingang

Appendix E - Room Labels



English	German
Toilet	Toilette
Bathroom	Badezimmer
Shower	Dusche
Living	Wohnen
Sleeping	Schlafen
Garage	Garage
Cab	Fahrerhaus
Cab	Fahrerhaus
Entrance	Eingang

English	German
Roof	Dach
Kitchen	Küche
Dining	Esszimmer
Climate	Klima
Lights	Licht
Auxiliary	Auxiliary
Technology	Technik
Motor	Motor
Cabover	Alkoven

Appendix F - Light Controls

Visual

RGB/RGBW

Warm/Cold

Single

Single w Double

Function

The first Button always toggles the Light state and the state LED will always be calculated. All Systems dim GND and the Stripes have got to have a steady DC+ connection.

RGB — Controls a RGB Stripe with Color Selection on second button
- Needs 3 Outputs R G B

RGBW — Controls a RGBW Stripe with Color Selection on second button
- Needs 4 Outputs R G B W

Warm/Cold — Controls a Warm&ColdWhite Stripe with Color Selection
- Needs 2 Outputs WarmWhite and ColdWhite

Single — Dims a Single Light Output

Single w Double — Dims a Single Light Output
- Second Output will toggle another Output

Appendix G - Output Controls

Visual

Left with LED

Right with LED

Both with LED

LED only

Left

Right

Both

Function

On/Off

-First Button switches ON,
-Second Button switches OFF

Single & Double

-First generates Single Tap
-Second generates Double Tap

Toggle

-Toggles up to two Outputs

Double

-Double Tap on up to two outputs

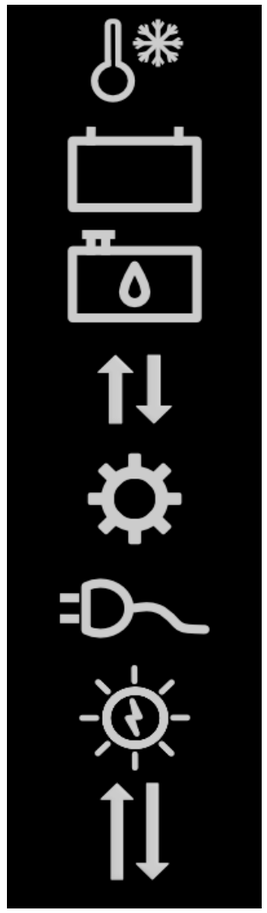
On		-Switches up to 2 outputs ON
Off		-Switches up to 2 outputs OFF
Single Tap		-Single Tap on up to two outputs
Toggle XOR		-Toggles two outputs depending on the configured led state input.
Single Tap XOR		-Single tap on one of the two outputs depending on the configured led state inputs value. If the LED is „inverted“, the logic will be inverted.
Off after … (10s , 30s, 1m, 10m, 30m, 1h)		-Switches one output ON for a defined time. Second output got to be set to a virtual box output to be used as storage
Switch @X%SOC (20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%)		-Switches one output ON if the measured battery capacity is above the configured value . The LED Input should be set to the virtual box output set as the second output. This is needed as a storage for the internal function. If the LED is „inverted“ , the output will be ON under the configured value. The Second button overrides the output until the next regular switching occurs

Appendix H - Climate Controls

English	German	
Gas	Gas	If ON, all trades that can use Gas, are supposed to use it
Propane	Propan	If ON, all trades that can use Propane, are supposed to use it
Diesel	Diesel	If ON, all trades that can use Diesel, are supposed to use it
Electro Eco	Elektro Eco	If ON, all trades that can use Electricity, are supposed to use it on the low-power step
Electro Max	Elektro Max	If ON, all trades that can use Electricity, are supposed to use it on the high-power step
Gasoline	Benzin	If ON, all trades that can use Gasoline, are supposed to use it
Furnace	Heizung	If ON, all trades that can be used for heating are used

Air Condition	Klimaanlage	If ON, all trades that can be used for cooling are used
Auxiliary Heater	Zusatzheizung	Enables the Auxiliary Heating system if available
Floor Heating	Fußbodenheizung	For future use
Vent	Ventilator	For future use
Water Eco	Wasser Eco	If ON, all trades that can be used for warm water generating are used on low power
Water Hot	Wasser Heiß	If ON, all trades that can be used for warm water generating are used on high power
Night setback	Nachtabsenkung	For future use
Night mode	Nachtmodus	For future use
Water preheat	Wasservorheizer	For future use
Malfunction	Störung	Can be used with „Manual Heater“ with Input
Operation	Betrieb	Can be used with „Manual Heater“ with Input

Appendix I - Classic start page side Labels



Climate Zones

Battery

Tanks

To the room overview

settings

AC In and Output (Multiplus or Inverter)

Solar

Alternative Icon for the room overview