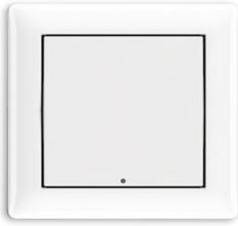


Dear SOREL Customer

the technical trends of the year will be shaped by the interplay of increasing connectivity, extensive use of sensors, and software intelligence. This is often referred to as the Internet of Things and opens up fascinating possibilities for all kinds of HVAC applications. The SOREL team is strongly committed to making these technologies accessible for the digital enhancement of your heating systems. At the same time, it is important to have both feet on the ground to preserve well-established solutions from unnecessary overload. Our motto "Temperature Control Made Simple" continues to guide us well here.

Besides the range of well-proven temperature controls, we recommend a closer look at the following new highlights in this catalogue:



The new Room Sensor Smart for °CALEONbox multi-zone controls for surface heating on page 16 for wireless communication of room temperature and humidity via WiFi.



°CALEON App Pro for remote servicing opportunities - enables the installer or OEM technician to fully commission, parameterise and monitor °CALEONbox surface heating controls remotely (p. 15).



Fan coil function for continuous control by 0-10V signal with °CALEON Clima



Combination of decentralised fresh water with a weather-compensated heating controller in the new HCC Fresh on page 37

We would be pleased if there is something suitable for you. If not, we would be happy to have a chat with you on a tailor-made OEM development. In any case, we look forward to hearing from you and are at your side with advice and assistance!

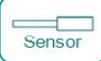


Jonas Bicher and Georg Bicher, CEOs

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Sensor inputs Pt1000

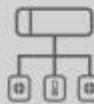
 Sensor inputs	 0-10V or PWM signal	 Connectivity Data logger	 Connectivity to °CALEONbox
 Room sensor	 Potential free relay	 Ethernet connection	 WLAN
 Direct sensors	 Zones	 LIN Bus	 °CALEON App
 Relay outputs with NO contact	 Integrated temp. and humidity sensor	 Connectivity to SOREL Controllers	 Max. attainable temperature controller class
 Relay outputs with changeover contact	 Voltage output for external devices	 Connectivity to °CALEON	

°CALEONbox

Universal system and multi-zone controller for surface heating systems and heat interface units. Particularly time-saving installation and flexibly expandable with optional additional functions for free outputs.



Controls up to 8 zones with 1-4 actuators each in 24V or 230V version



For each zone, either °CALEON Room Controller or 1-wire sensor can be connected



Comfortable system configuration via touch and full text via °CALEON Room Controller. At the same time offers a high-quality room thermostat for the end user.



Easy maintenance with software updates via WiFi and elegant smartphone app for end users with °CALEON Smart Room Controller



Built-in setup wizard to facilitate fast and correct commissioning



Preventive dew point calculation based on relative humidity in the rooms



Additional functions can be selected for free outputs: weather-compensated mixing circuit, auxiliary heating, switching heating/cooling, dehumidifier, etc. (depending on model)

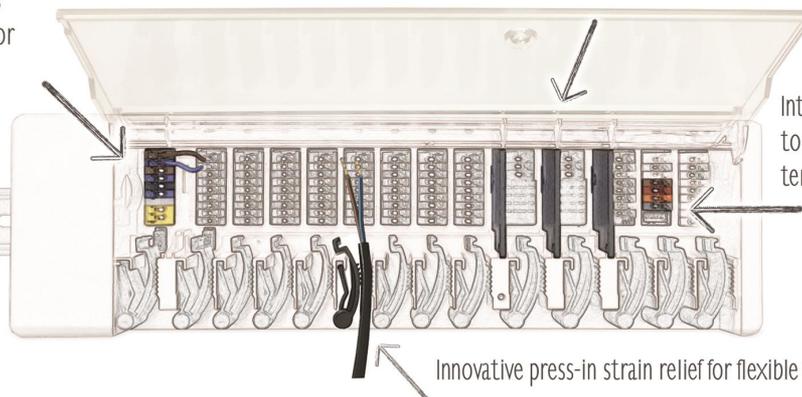


Modular system for connecting several °CALEONboxes with each other or with further SOREL controllers. For example, outdoor temperature and heating or cooling requirements are exchanged

Easy installation

Press-on clamp terminals instead of screw clamps for easy wiring

Removable dividers and front cover for more space during clamp connection



Easy installation also on DIN rail

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

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Overview

New: WiFi sensors available
New: Fan coil function integrated



	°CALEONbox	°CALEONbox Clima	°CALEONbox Fresh
Power supply	230VAC	230VAC	230VAC
Internal operating voltage	24VDC, 5VDC, 3.3VDC	24VDC, 5VDC, 3.3VDC	24VDC, 5VDC, 3.3VDC
Relay outputs 230VAC (NO contact)	9	9	9
Relay outputs potential-free with changeover contact	2	2	2
0-10V or PWM outputs	3	3	3
24VDC voltage output for external devices	✓ max 12W	✓ max 12W	✓ max 12W
LED for operating states	14	14	14
Temperature sensor inputs *1	up to 20	up to 20	up to 20
Grundfos VFS sensor input *4	✗	✗	1
Compatible room controller *3	up to 8 °CALEONs	up to 8 °CALEON or °CALEON Clima	up to 8 °CALEON or °CALEON Clima
Digital interface *2	2x CAN + 1-Wire	2x CAN + 1-Wire	2x CAN + 1-Wire
Heating pump *5	230VAC on/off / PWM	230VAC on/off / PWM	230VAC on/off / PWM
Heating mixer *6	0-10V or PWM	0-10V or PWM	0-10V or PWM
Heating zones and actuators *7	8 x 4	8 x 4	8 x 4
Heat request *8	✓	✓	✓
Fan coil function via 0-10V/PWM NEW	✓	✓	✓
Heating/cooling switch *8	✗		
Cooling request *8	✗		
Dehumidifier *9	✗		
Heating operating times per day *10	8 per zone	8 per zone	8 per zone
Comfort function for rapid cooling *10	✓ for each zone	✓ for each zone	✓ for each zone
Energy-saving heating mode Eco *10	✓ for each zone	✓ for each zone	✓ for each zone
Cooling operating times per day *10	✗	8 per zone	8 per zone
Comfort function for fast cooling *10	✗	✓ for each zone	✓ for each zone
Energie saving cooling mode Eco *10	✗	✓ for each zone	✓ for each zone
Internet access via °CALEON smart *11	✓	✓	✓
Dew point calculation *12	✗		
PID control for constant room temperature	✓	✓	✓
Circulation pump operation	✗	✗	

*1 by 1-wire bus up to 20 sensors, additional temperature sensors by CAN network

*2 two separate CAN networks, 1x private (apartment), 1x heating system (building)

*3 up to 8 °CALEON can be supplied with 24VDC by °CALEONbox. When connecting more °CALEONs, an additional power supply is required. Alternatively, an external 230VAC thermostat can be operated for each zone.

*4 for measuring tap temperature and flow for domestic hot water control

*5 via 230VAC relays on/off, or speed-controlled via PWM

*6 Flow temperature control is done according to room temperature, optionally weather-compensated or combination of weather-compensation with room temperature influence

*7 up to 8 heating zones with up to 3x 230VAC actuators as NO or NC design also with PID control

*8 potential-free relay contact, 0-10V or PWM signal or via CAN network

*9 free assignable function on one of the relay or V outputs

*10 adjustable via °CALEON room controller or °CALEON Clima room controller

*11 adjustable via °CALEON smart room controller 24VDC with WiFi

*12 separately in every zone where °CALEON Clima room controller is installed

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°CALEONbox

°CALEONbox



For surface heating systems in combination with up to 8 °CALEON room controllers.

Inputs / Outputs				Connectivity
20x 1-Wire	2x 0-10V PWM	32x B-Zones	9x 230 VAC	
		1x PotentialFree	3x 0-10V PWM	
		24VDC 12' e.g. 8x °CALEC		

Art. No. 74001 - °CALEONbox				
from quantity	1	5	10	20

°CALEONbox Clima



For surface heating and cooling systems in combination with up to 8 °CALEON Clima room controllers. The continuous dew point control in each room ensures safe and efficient cooling operation.

Inputs / Outputs				Connectivity
20x 1-Wire	2x 0-10V PWM	32x B-Zones	9x 230 VAC	
		2x PotentialFree	3x 0-10V PWM	
		24VDC 12' e.g. 8x °CALEC		

Art. No. 74002 - °CALEONbox Clima				
from quantity	1	5	10	20

°CALEONbox Fresh



For surface heating, cooling and decentral fresh water systems with up to 8 °CALEON Room Controllers. The electronic fresh water control provides a stable tapping temperature

Inputs / Outputs				Connectivity
20x 1-Wire	2x 0-10V PWM	32x B-Zones	9x 230 VAC	
1x VFS		2x PotentialFree	3x 0-10V PWM	
		24VDC 12' e.g. 8x °CALEC		

Art. No. 74003 - °CALEONbox Fresh				
				on request

Note: Sales only to manufacturers of fresh water systems.

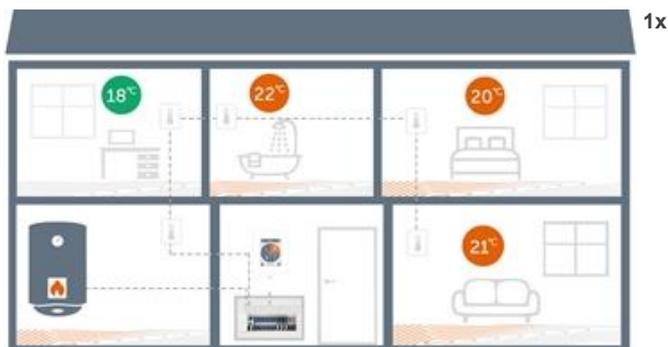


OEM service: We are happy to contribute our experience from over 10 years of fresh water development in order to optimally adjust all control parameters for your fresh water station - for a fast and stable tap temperature in all common tap profiles.

Application Examples

°CALEONboxes and °CALEON Room Controllers can be combined as desired. Some possibilities:

Zone control in a single-family house with heat request:



1x °CALEONbox
1x °CALEON
1x Room Sensor 1-Wire per additional room

Zone control in a single-family house with several °CALEON, WiFi and heat request:



1x °CALEONbox
1x °CALEON Smart (WiFi)
1x °CALEON Room Controller per additional room

Single-family house with energy request and season switch heating/ cooling:



1x °CALEONbox Clima
2x °CALEON Clima
1x Room Sensor 1-Wire per additional room

Heating and cooling in a single-family house with WiFi room sensors:



1x °CALEONbox Clima
1x °CALEON Clima Smart (WiFi)
1x Room Sensor Clima Smart per additional room (WiFi)

Heating and cooling in offices/ hotels/ commercial buildings:



1x °CALEONbox per 8 rooms
1x Room Sensor 1-Wire per room
1x °CALEON Clima Room Controller

Multi-family house with decentral fresh water control:



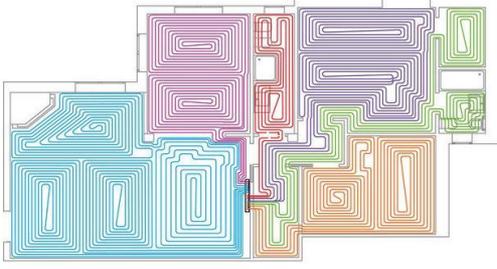
1x °CALEONbox Fresh per apartment
1x °CALEON Fresh per apartment
1x Room Sensor 1-Wire per additional room

°CALEONbox Configurator

Find the right components for controlling your underfloor heating and cooling system with the °CALEONbox in 7 steps.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8

How many zones does your surface heating have?



A "zone" refers to an independently controlled room or area. For each zone, up to four actuators can be used.

Continue

SOREL GmbH Mikroelektronik Privacy policy

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8

Your Solution:

Bill of Materials

Suggested Wiring Plan

°Cbox	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Add. Sensor
									
									
		(1x)	(1x)	(1x)		(1x)	(1x)	(1x)	1x Outdoor

Start Configurator:

<https://caleonbox.sorel.de>



Recommended accessories

°CALEON Room Controller



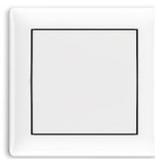
→ Page 12

°CALEON Klima Room Controller



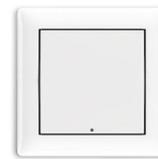
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Room Sensor 1-Wire



→ Page 16

Room Sensor Smart



→ Page 16

HCC Controller



→ Page 20

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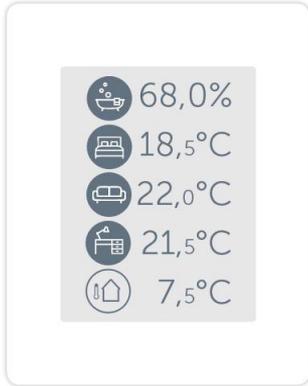
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 	<p>Controlling large underfloor heating systems → https://sorel.de/en/commercial-ufh-systems-blog/</p>	 	<p>°CALEONbox Controls for Underfloor Heating and Cooling → https://youtu.be/puzsUHLFCU</p>
 	<p>The Requirements of Surface Cooling for the Control Technology → https://sorel.de/en/surface-cooling-control-blog/</p>	 	<p>Simplified Wiring of Underfloor Heating Controllers with °CALEONbox → https://youtu.be/YI6yCJgI4bs</p>
 	<p>Multi-zone control of surface heating systems with only 1 thermostat → https://sorel.de/en/multi-zone-control-of-surface-heating-systems-with-only-1-thermostat-blog/</p>		

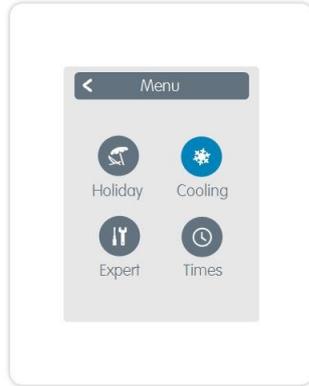
°CALEON Room Controllers



Comfortable touch controllers with integrated temperature and humidity sensor for convenient remote control of heating and cooling systems from the living room. Control the heating zones in conjunction with a °CALEONbox and influence the flow temperature with °CALEONbox and HCC controllers. This enables even faster and more precise control of the room temperature for panel heating/cooling, radiators or fan coils.



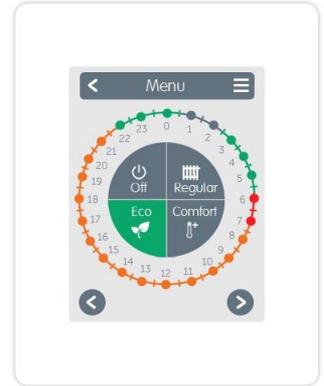
Room selection with several heating zones



Season switch heating/cooling (Clima)



Adjust operating modes and feel-good temperature



Intuitive time switch for weekly program

Application Examples

Zone control in a single-family house with several °CALEON, WiFi and heat request:



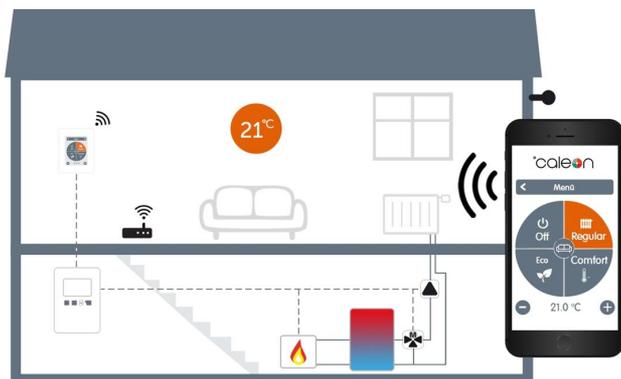
- 1x °CALEONbox
- 1x °CALEON Smart (WiFi)
- 1x °CALEON per room

Zone control in a single-family house with energy request and season switch heating/cooling:

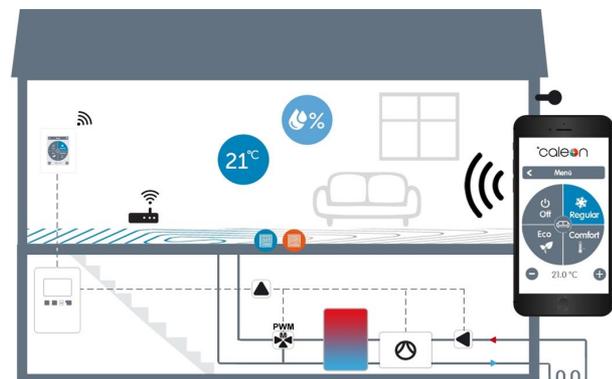


- 1x °CALEONbox Clima
- 2x °CALEON Clima
- 1x Room Sensor 1-Wire per room

Weather-compensated heating circuit with room influence: Weather-compensated heating circuit for heating and cooling:



- 1x MHCC
- 1x °CALEON Smart (WiFi)



- 1x LHCC
- 1x °CALEON Smart (WiFi)

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Overview



	°CALEON Room Controllers	°CALEON Smart Room Controller
Room temperature 0...60°C, resolution 0.1°C	✓	✓
Relative humidity 0%-100%, resolution 0.1%	✓	✓
Heating operation	✓	✓
Cooling operation	✗	✗
Power supply	24VDC	24VDC
Switching output	✗	✗
Heating times per day	8	8
WLAN module N 2.4GHz for firmware updates and °CALEON App	✗	✓👉
Glass cover with capacitive touch panel	✓	✓
2.8" TFT display with 240 x 320 dots	✓	✓
Housing color / dimensions H x W x D in mm	RAL 9003 / 95 x 75 x 19	RAL 9003 / 95 x 75 x 19
Product details	Page 12	Page 12

New: Fan coil function for continuous control by 0-10V



	°CALEON Clima Room Controllers	°CALEON Clima Smart Room Controller
Room temperature 0...60°C, resolution 0.1°C	✓	✓
Relative humidity 0%-100%, resolution 0.1%	✓	✓
Heating operation	✓	✓
Cooling operation	✓👉	✓👉
Power supply	24VDC	24VDC
Switching output	2x 0-10V👉	2x 0-10V👉
Thermostat function	✓	✓
Dehumidifier function	✓	✓
Season switch function	✓	✓
Fan coil function NEW	✓	✓
Heating times per day	8	8
WLAN module N 2.4GHz for firmware updates and °CALEON App	✗	✓👉
Glass cover with capacitive touch panel	✓	✓
2.8" TFT display with 240 x 320 dots	✓	✓
Housing color / dimensions H x W x D in mm	RAL 9003 / 95 x 75 x 19	RAL 9003 / 95 x 75 x 19
Product details	Page 13	Page 13

°CALEON Clima Room Controllers

Room Controllers for remote control and optimisation of the heating and cooling system in combination with SOREL heating controllers or °CALEONbox Clima.

°CALEON Clima Room Controllers



Elegant room controller with capacitive TFT touch panel for comfortable remote control and optimisation of the heating system in combination with LHCC, XHCC and °CALEONbox Clima.

Inputs/ Outputs	Connectivity	Menu Languages
1x 2x 0-10V PWM		

Art. No. 70002 - °CALEON Clima Room Controller

from quantity	1	10	20	40

°CALEON Clima Smart Room Controller



Elegant room controller with capacitive TFT touch panel, integrated WLAN module and matching smartphone app for comfortable remote control and optimisation of the heating system in combination with LHCC, XHCC and °CALEONbox Clima.

Inputs/ Outputs	Connectivity	Menu Languages
1x 2x 0-10V PWM		

Art. No. 70004 - °CALEON Clima Smart Room Controller

from quantity	1	10	20	40

Recommended Accessories

CAN
Connection cable



→ Page 59

HCCs



→ Page 20

°CALEONbox



→ Page 6

°CALEON App



→ Page 14



The °CALEON app provides secure and convenient remote access to one or more °CALEON smart room controllers. The exact functional range of the app varies with the installed °CALEON version. The °CALEON app is available for free in the Google Play (Android) and Apple App Store (iOS).



Simple setup via setup wizard



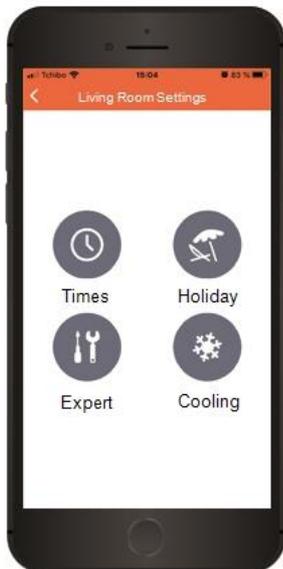
Temperatures and humidity in real time



Select operating mode and set target room temperature



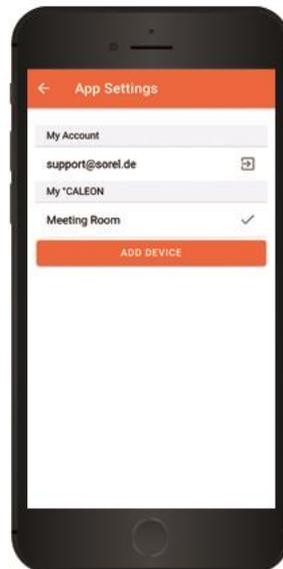
Configure time program



Season switch heating/cooling



Activate holiday mode



Access to multiple systems



Service values



°CALEON App Pro

Adds full access to the expert menu of the °CALEON Smart Room Controller to the free end customer app.

Offer your customers real added value through professional remote servicing such as:

- Serviced Setup
- Remote control
- or the controlled installation of firmware updates on the °CALEON Smart Room Controller and °CALEONbox.

Each licence provides 1 user (e.g. craftsman or service technician) with full access to any number of installations.



Setup Wizard for commissioning °CALEON and °CALEONbox



Remote parameterisation of all settings



Advanced diagnostic tools



Troubleshooting or for function upgrades

°CALEON App Pro	
Service Abo	
Quick Fix Licence	

Note: exact price may vary by country and handling decisions by platform operators

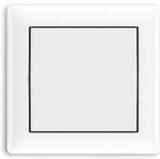


For personalised OEM apps see page 67 or contact us at oem@sorel.de

Room Sensors for °CALEONbox

New:
WiFi sensors
available

Each zone of the °CALEONbox requires either 1 °CALEON or room sensors to enable zoning control. The in-wall variant of the room sensor is compatible with all square 55 mm switch frame systems from common manufacturers such as Gira, Busch-Jaeger, Jung, Berker and Merten.



Room Sensor 1-Wire

Digital room temperature sensor with communication via 1-wire bus in combination with °CALEONbox.

Power supply	3,3 VDC ... 5 VDC SELV or PELV
Measurement range	0 °C ... 60 °C accuracy: +/- 1 °C resolution: 0,1 °C
Protection Class	IP20
Max. cable length	Up to 100 m powered (three-wire connection recommended), up to 50 m parasitic (two-wire connection), using twisted pair cables
Dimensions/ Housing	80 mm x 80 mm/ plastic pure white/ other colour variants available on request
Installation methods	Flush-mounted switch box

Art. No. 80003 -Room Sensor 1-Wire

from quantity	1	10	20	40
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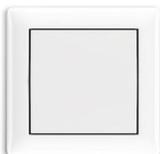
Room Sensor Clima 1-Wire

Digital room temperature and humidity sensor with communication via 1-wire bus in combination with °CALEONbox.

Power supply	3,3 VDC ... 5 VDC SELV or PELV
measurement range	0 °C ... 60 °C / 0% ... 100% accuracy: +/- 1 °C / +/- 6 % resolution: 0,1 °C / 0,1 %
Protection Class	IP20
Max. cable length	up to 100 m powered (three-wire connection recommended), use twisted pair cable
Dimensions/ Housing	80 mm x 80 mm/ plastic pure white/ other colour variants available on request
Installation methods	Flush-mounted switch box

Art. No. 80004 -Room Sensor Clima 1-Wire

from quantity	1	10	20	40
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Room Sensor Smart

Digital room temperature sensor with communication via WLAN in combination with °CALEONbox.

Power supply	230VAC
Measurement range	0 °C ... 60 °C accuracy: +/- 1 °C resolution: 0,1 °C
Protection Class	IP20
Dimensions/ Housing	80 mm x 80 mm/ plastic pure white/ other colour variants available on request
Installation methods	Flush-mounted switch box

Art. No. 80103 -Room Sensor Smart

from quantity	1	10	20	40
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Additional contents



Hardwired or Wireless? Pros and Cons for
HVAC applications

→ <https://sorel.de/en/wireless-hvac-blog/>

Room Sensors for °CALEONbox



Room Sensor Clima Smart

Digital room temperature and humidity sensor with communication via WLAN in combination with °CALEONbox.

Power supply	230VAC
Measurement range	0 °C ... 60 °C / 0% ... 100%
	accuracy: +/- 1 °C / +/- 6 % resolution: 0,1 °C / 0,1 %
Protection Class	IP20
Dimensions/ Housing	80 mm x 80 mm/ plastic pure white/ other colour variants available on request
Installation methods	Flush-mounted switch box / other colour variants available on request

Art. No. 80104 -Room Sensor Clima 1-Wire

from quantity	1	10	20	40
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Room Sensor 1-Wire (on-wall)

Digital room temperature sensor with communication via 1-wire bus in combination with °CALEONbox.

Power supply	3,3 VDC ... 5 VDC SELV or PELV
Measurement range	0 °C ... 60 °C accuracy: +/- 1 °C resolution: 0,1 °C
Protection Class	IP20
Max. cable length	Up to 100 m powered (three-wire connection recommended), up to 50 m parasitic (two-wire connection), using twisted pair cables
Dimensions/ Housing	95 mm x 75 mm x 19 mm/ white plastic housing RAL 9003
Installation methods	Wall Installation

Art. No. 80001 -Room Sensor 1-Wire (on-wall)

from quantity	1	10	20	40
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Room Sensor Clima 1-Wire (on-wall)

Digital room temperature and humidity sensor with communication via 1-wire bus in combination with °CALEONbox.

Power supply	3,3 VDC ... 5 VDC SELV or PELV
measurement range	0 °C ... 60 °C / 0% ... 100%
	accuracy: +/- 1 °C / +/- 6 % resolution: 0,1 °C / 0,1 %
Protection Class	IP20
Max. cable length	up to 100 m powered (three-wire connection recommended), using twisted pair cables
Dimensions/ Housing	95 mm x 75 mm x 19 mm/ white plastic housing RAL 9003
Installation methods	Wall Installation

Art. No. 80002 -Room Sensor Clima 1-Wire (on-wall)

from quantity	1	10	20	40
---------------	---	----	----	----



Other housing colours and switch ranges on request

Heating Controllers HCC

Heating and system controllers from SOREL: **versatile and user-friendly**. Thanks to the crystal clear user guidance, different types of solar systems can be operated intuitively - **from small to complex**.

Full Text Menu

Context dependant help texts explain every setting for easy understanding.

Setup Wizard

Guides step by step through all necessary settings for quick and easy commissioning.

Graphic Display

Animated system visualisation, illustrative heating curves and energy statistics.

Modular System

By activating additional functions via free relays, the basic systems can be extended easily and flexibly.

Multilingual

Various menu languages freely selectable for clear understandability.



Network-compatible

Controllers can be networked via CAN bus or connected to the internet.

PC Simulation

Free Windows software facilitates product trainings, performance tests and technical support.

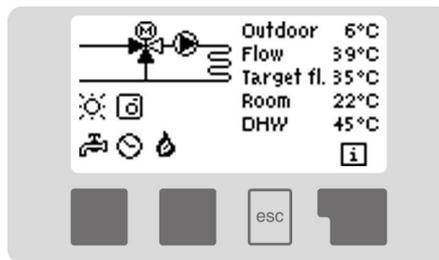
ErP-Bonus

Achieve maximum temperature class VIII with SOREL heating controllers for 5% bonus on the EU energy label calculation.

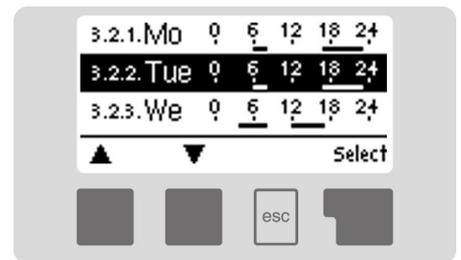
Operator Guidance



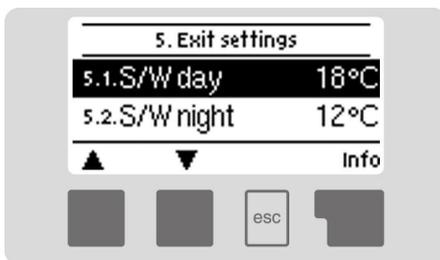
The setup wizard will rapidly guide you through the settings which need to be performed in a logically reasonable sequence. This way, any misadjustment is avoided and the parametrising is simplified.



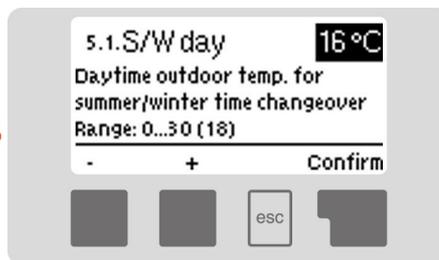
The display of the current measured values and the operating conditions is performed in a graphic mode with animations. Important functions are indicated as icons.



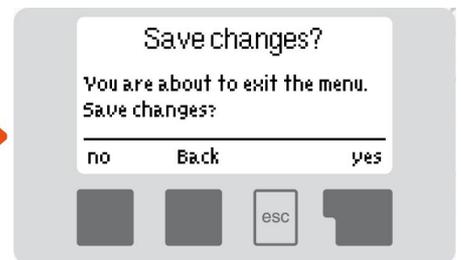
Three operating times can be set per weekday and can be transferred to other days as well.



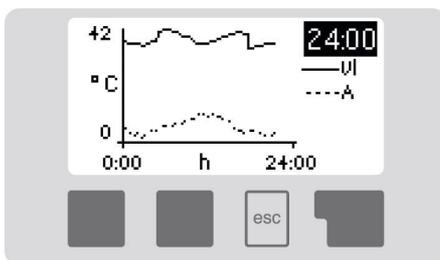
The clear menu offers options for request, analysis and setting.



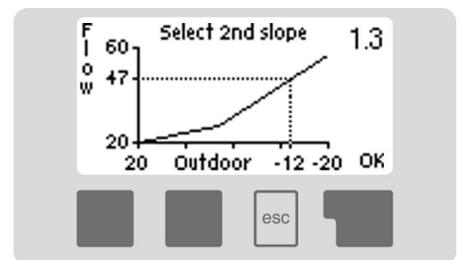
The self explanatory operator guidance allows the simple parametrisation, assisted with functional explanations.



Confirmation dialogs and menu block functions prevent unwanted misadjustments.



The function control and the long term monitoring of the installation is provided by recording and evaluating of the data.



The split heating curve is used to produce the most comfortable temperature in different building conditions.

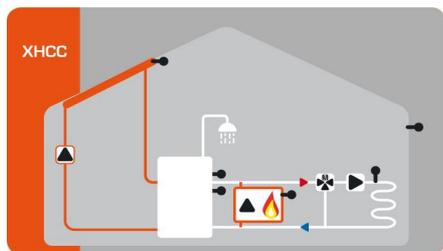
Additional functions for extending predefined schemes

Examples of additional functions

- Temp. Difference
- Booster pump
- Cooling function
- Solar function
- Solid fuel boilers
- Solar bypass
- Burner with pump
- 2nd Heat circuit
- Error message
- Parallel operating
- Circulation
- Relay always on

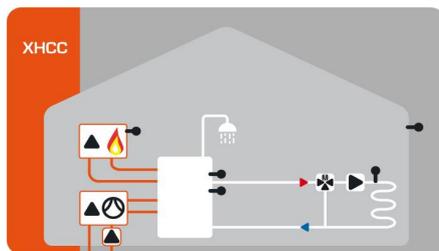
Example:

System 1 +  + 



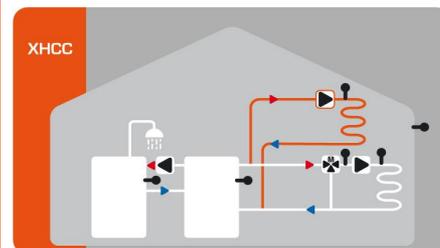
Combined storage tank with mixed heating circuit with additional function solar and additional heating with pump

System 1 +  + 



Combined storage tank with mixed heating circuit with additional function, additional heating and heat pump / compressor with brine pump.

System 8 + 



Combined storage tank with buffer storage tank with mixed heat circuit with additional function 2nd heating circuit.



Additional function easily adjusted:

```
7.7.Relay 1 Heating circ. 1
7.8.Relay 2
7.9.Relay 3
▲ ▼ OK
```

1. Select free relay

```
7...4.RFI mixer open
7...5.Heating circ. 2
7...8.Difference
▲ ▼ OK
```

2. Select additional function

```
7...1.Heating circ. 2 on
7...2.S/W day 18.0°C
7...3.S/W night 12.0°C
▲ ▼ Info
```

3. Set function

Heating Controllers HCC



HCC	MHCC
Sensor inputs	4
of which for Pt1000 temperature sensors	3
of which for remote adjuster	1
of which for Direct Sensors VVX / VFS / RPS Temperature	0
of which for Direct Sensors VVX / VFS / RPS flow	0
Compatible room thermostat	°CALEON / RC20 / RC21
Relay outputs 230V	3
Relay output voltage-free	×
Outputs 0..10V or PWM signal (for modulating burner control)	1
24VDC output for external devices	✓ up to 2W
Number of applications	2
Extension of pre-defined systems by selectable additional functions	×
LEDs red/green for display of operating status	✓
Programmable thermostat times and functions per day	3
Comfort function for quick heating	✓
Heating circuit with mixer	✓
Heating circuit without mixer	×
Cooling function for heating circuits	×
Dew point correction in "Cooling" mode	×
Heat pump control	×
Season switch "Heating / Cooling"	×
Cooling function with air conditioning	×
Domestic hot water function with operating times	×
Circulation of domestic hot water with operating times	×
Legionella protection via additional heating	×
Solar function	×
Setup wizard	✓
Buffer discharge protection	✓
Anti-freeze protection	✓
Seizing Protection	✓
Function control and error memory with date and time	✓
Error memory and analysis with date and time	✓
Input for low energy tariff or PV overproduction (PV contact)	×
Menu blocker	✓
CAN bus connection for SOREL Connect	✓
Data logging on microSD card	via data logger
Ethernet connection	via data logger
Dimensions Height x Width x Depth in mm	163 x 110 x 51
Housing colour	RAL 9003
Protection Class	IP40
Mounting Hardware, Spare Fuse and User Manual	✓
Product details	Page 22



LHCC	XHCC
10	17
6	11
1	2
2	2
2	2
°CALEON / °CALEON Klima / RC20 / RC21	°CALEON / °CALEON Klima / RC20 / RC21
3	6
1	1
2	4
✓ up to 6W	✓ up to 6W
22	13
✓	✓
✓	✓
2 x 3	2 x 3
✓	✓
0 - 2	0 - 2
0 - 2	0 - 2
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
via data logger	✓
via data logger	✓ (only at V2)
163 x 110 x 51	228 x 180 x 53
RAL 9003	RAL 9003
IP40	IP40
✓	✓

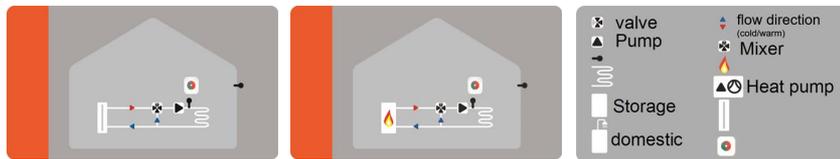
MHCC - Medium Heating Controllers

Weather-compensated heating controller for a mixed circuit with heat request.

Inputs / Outputs	Connectivity	Menu Languages
<ul style="list-style-type: none"> 3x Pt1000 2x 230 VAC 1x RC20/RC21 1x 230 VAC 1x 0 - 10V 24VDC 2W e.g. 1x °CALEON 	<ul style="list-style-type: none"> °CALEON Data logger caleon box 	



Hydraulic variants MHCC



Recommended Accessories

°CALEON Room Controller



→ Page 12

Data logger



→ Page 59

Temperature sensors Pt1000



→ Page 61

External switching relay 0-10VDC



→ Page 63

Outdoor sensor TA55



→ Page 61

List Prices

Art. No. 23001 -MHCC	Art. No. 23201 -MHCCSet with 2 Pt1000 sensors (TR/ S2 and TA55)
from quantity	from quantity
1	1
5	5
10	10
20	20
Art. No. 23301 -MHCCSet with 3 Pt1000 sensors (TT/ S4, TR/ S2 and TA55)	Art. No. 23311 -MHCCSet with 3 Pt1000 sensors (TT/ S4, TR/ S2 und TA55) and external relay 1W 6A
from quantity	from quantity
1	1
5	5
10	10
20	20

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

SOREL GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

LHCC - Large Heating Controllers

Weather-compensated heating controller for up to two mixed heating and cooling circuits as well as free assignable functions for unused relays.

Inputs / Outputs	Connectivity	Menu Languages
6x Pt1000 3x 230 VAC	°CALEON Data logger °caleon box	
2x VVX/VFS/RFS 2x 0-10V/PWM		
1x RC20/RC21 1x Potentialfree		
24VDC 6W e.g. 3x °CALEON		



Hydraulic variants LHCC

Recommended Accessories

°CALEON Room Controller



→ Page 12

°CALEON Clima Room Controller



→ Page 13

Data logger



→ Page 59

CAN connection set



→ Page 59

Temperature sensors Pt1000



→ Page 61

List Prices

Art. No. 27005 - LHCC

from quantity	1	5	10	20
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Art. No. 27305 - LHCCSet with 3 Pt1000 sensors TR/ S2, TA55 and TT/ S4

from quantity	1	5	10	20
---------------	---	---	----	----

Art. No. 27315 - LHCCSet with 3 Pt1000 sensors TR/ S2, TA55, TT/ S4 and external relay 1 W 6 A

from quantity	1	5	10	20
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Art. No. 27325 - LHCCSet with 3 Pt1000 sensors TR/ S2, TA55, TT/ S4 and PWM actuators

from quantity	1	5	10	20
---------------	---	---	----	----

Art. No. 27335 - LHCCSet with 3 Pt1000 sensors TR/ S2, TA55, TT/ S4 and external relay 1 W 6 A and PWM actuators

from quantity	1	5	10	20
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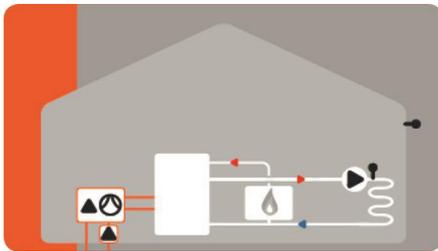


LHCC - Additional functions for free relays

- Thermostat
- Return flow increase
- Transfer
- Difference
- Solid fuel boilers
- Free Cooling
- Dehumidifier
- Error message
- Pressure monitoring
- Parallel operating with R1
- Parallel operating with R2
- Always on
- Heat circuit 1/2
- Solar
- Burner
- Compressor
- Boiler pump
- Remote
- HP Compressor
- DHW Valve
- Cooling Valve
- Circulation
- Heating rod
- RLA Mixer
- Dissipation
- Season Switch

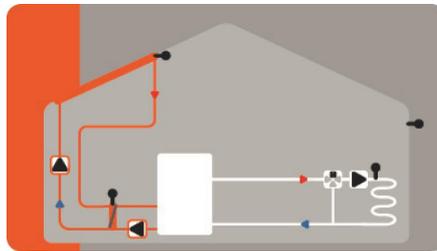
Example:

System 1 +  



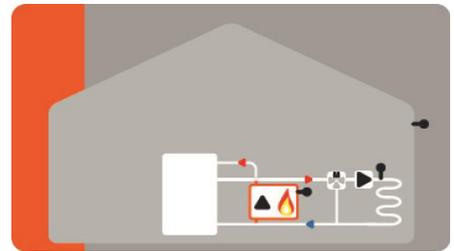
Combined storage with heating circuit with additional functions glycol pump and compressor.

System 2 +  



Combined storage with mixed heating circuit with additional functions solar and heat exchangers.

System 8 +  



Combined storage or buffer storage with mixed heating circuit with additional function burner and boiler pump.

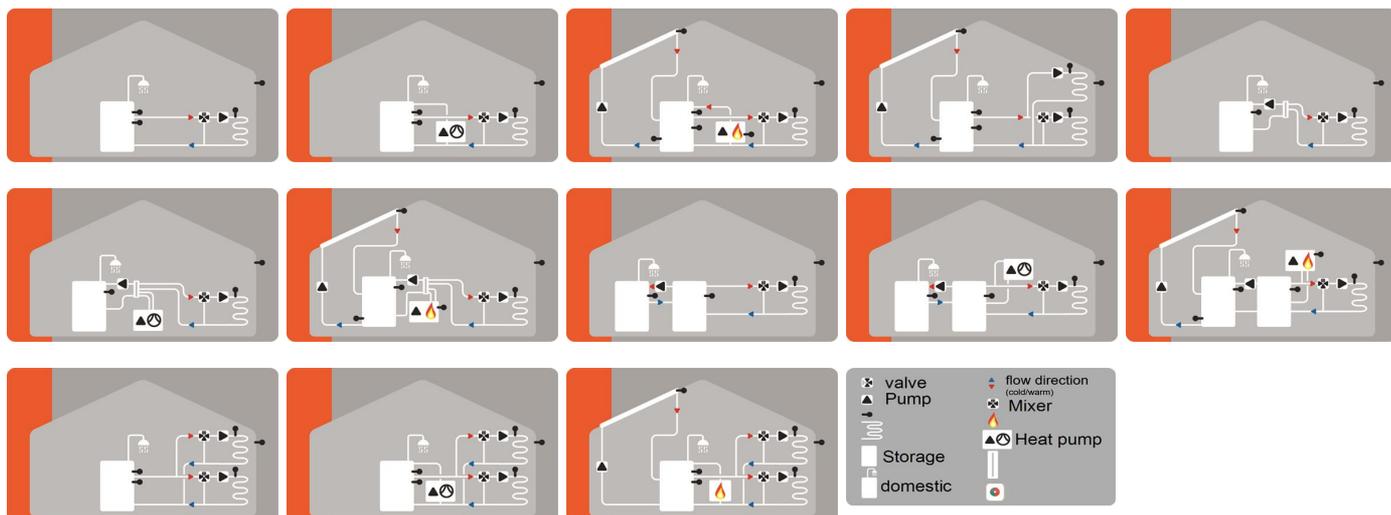
XHCC - XtraLarge Heating Circuit Controller

Weather-compensated heating controller for complex systems with up to two mixed heating and cooling circuits, different heat sources and free assignable functions for unused relays.

Inputs / Outputs		Connectivity		Menu Languages
9x Pt1000	6x 230 VAC	°CALEON		
2x RC20/RC21	1x PotentialFree	Lan	Data logger	
2x VVX/VFS/RPS	4x 0-10V/PWM			
24VDC 6W e.g. 3x °CALEON				



Hydraulic variants XHCC



Recommended Accessories

°CALEON Room Controller



→ Page 12

°CALEON Clima Room Controller



→ Page 13

System-Dependent Pre-Parametrisation



→ Page 71

Temperature sensors Pt1000



→ Page 61

Immersion sleeves



→ Page 62

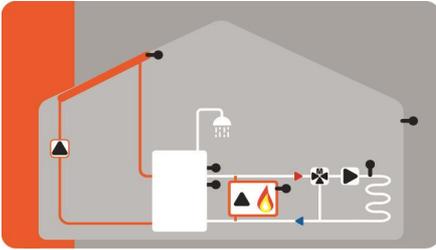
List Prices

Art. No. 28001 -XHCCwithout Ethernet					Art. No. 28002 -XHCCwith Ethernet				
from quantity	1	5	10	20	from quantity	1	5	10	20

XHCC - Additional functions for free relays

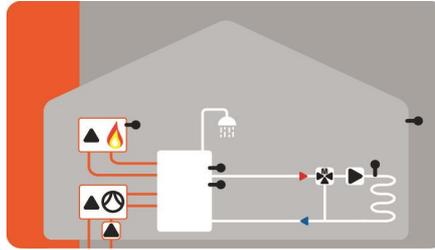
- Thermostat
- Mixer
- Return flow increase
- Transfer
- Difference
- Solid fuel boilers
- Error message
- Free Cooling
- Dehumidifier
- Pressure monitoring
- Parallel operating with R1
- Parallel operating with R2
- Always on
- Heat circuit 1/2
- Solar
- Burner
- Compressor
- Remote 1/2
- HP Compressor
- DHW Valve
- Cooling Valve
- Circulation
- Heating rod
- RLA Mixer
- Dissipation
- Season Switch

System 1 +  + 



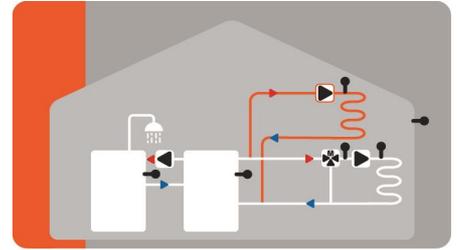
Combined storage tank with mixed heating circuit with additional function solar and additional heating with

System 2 +  +  + 



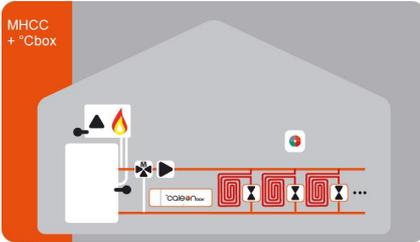
Combined storage tank with mixed heating circuit with additional function solar and additional heating and heat pump / compressor with brine pump.

System 8 + 

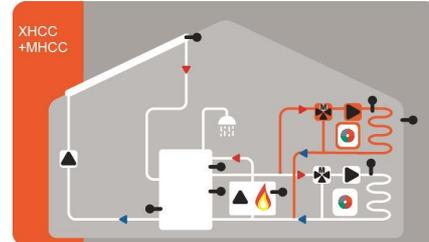


Combined storage tank with buffer storage tank with mixed heat circuit with additional function 2nd heating circuit.

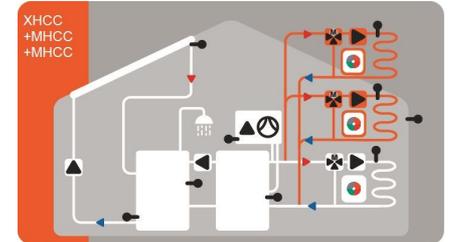
MHCC as an extension Module for 1 Mixed Heating Circuit each



MHCC standard scheme: gas boiler extended with °CALEONbox.

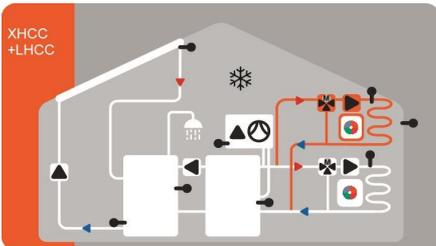


XHCC standard system: Combined storage with solar, gas boiler and heating circuit. An MHCC with °CALEON adds another heating circuit.

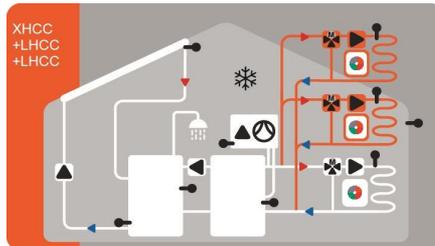


XHCC standard system: Buffer and hot water storage with solar, heat pump and heating circuit. Two MHCCs with °CALEON add two heating circuits.

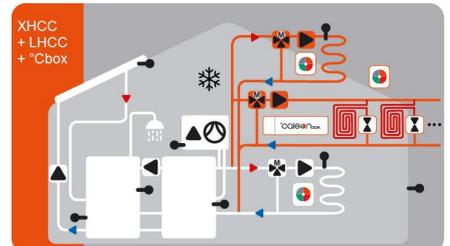
LHCC with °CALEON Clima as an extension for 1 Heating and Cooling Circuit



XHCC standard system: Buffer and hot water storage with solar, heat pump and heating and cooling circuit extended by 2 LHCC and 2 °CALEON Clima for an additional heating and cooling circuit.



XHCC standard system: Buffer and hot water storage with solar, heat pump and heating and cooling circuit extended by 1 LHCCs and 1 °CALEON Climas for two additional heating and cooling circuits.



XHCC standard system: Buffer and hot water storage with solar, heat pump and heating and cooling circuit extended by 1 LHCCs and 1 °CALEON Climas for two additional heating and cooling circuits.

Heating circuit group

Heating circuit group MHCC



Completely preassembled and tested 2-Way pump group with 3-way-mixer, Servomotor and weather compensated Heating Controller MHCC incl. sensors

- Size: 466 x 250 x 215 mm
- PN10, max. Temp. 110 °C, KVS 6,0
- Flow right, return left
- 2 ball valves with integrated thermometer
- external connector 1" Female
- Speed controlled High efficiency pump
- Wilo Stratos Pico 25/1-6
- 3-way-mixing valve with KVS 10,0
- Servomotor with 90° operating range
- Heat Circuit Controller MHCC
- completely prewired with connection box
- Outdoor sensor TA55, flow sensor TR/S1.5

Art. No. 6 0 5 5 0 -Heating circuit group MHCC

from quantity	1	5	10	20
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Heating circuit group LHCC



Completely preassembled and tested 2-Way pump group with 3-way-mixer, Servomotor and weather compensated Heating Controller LHCC incl. sensors

- Size: 466 x 250 x 215 mm
- PN10, max. Temp. 110 °C, KVS 6,0
- Flow right, return left
- 2 ball valves with integrated thermometer
- external connector 1" Female
- Speed controlled High efficiency pump
- Wilo Stratos Pico 25/1-6
- 3-way-mixing valve with KVS 10,0
- Servomotor with 90° operating range
- Heat Circuit Controller LHCC
- completely prewired with connection box
- Outdoor sensor TA55, flow sensor TR/S1.5
- L-Connection-Box for easy connection of additional sensors and CAN without opening the controller.

Art. No. 6 0 5 5 5 -Heating Circuit Group LHCC

from quantity	1	5	10	20
---------------	---	---	----	----



TC -Thermostat Controller

Controller with thermostat function for heating up the storage. Also for electrical backup heating of solar thermosiphon systems.



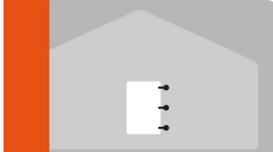
Inputs / Outputs



Menu Languages



Hydraulic variants TC



Temperature display



Thermostat S1



Thermostat S1 and S2



Thermostat S1 and S2



Thermosiphon

Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

External relay 4S



→ Page 63

List Prices

Art. No. 10006 - TC

from quantity	1	10	20	40
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Art. No. 10106 - TC Set with 1 sensor TT/S2 PT1000

from quantity	1	10	20	40
---------------	---	----	----	----

Art. No. 10206 - TC Set with 2 sensors TT/S2 PT1000

from quantity	1	10	20	40
---------------	---	----	----	----

Art. No. 10306 - TC Set with 3 sensors TT/S2 PT1000

from quantity	1	10	20	40
---------------	---	----	----	----

FWC Fresh Water Controllers

The controllers of the FWC series enable fast and precise regulation of the tap temperature in central fresh water stations. The heat from a storage is controlled and transferred to a heat exchanger via a pump or valve using the continuous flow principle, thus providing precisely tempered and legionella-free domestic hot water at the taps.

Full Text Menu

Context dependant help texts explain every setting for easy understanding.

Setup Wizard

Guides step by step through all necessary settings for quick and easy commissioning.

Graphic Display

Animated system visualisation, illustrative heating curves and energy statistics.

Modular System

By activating additional functions via free relays, the basic systems can be extended easily and flexibly.

Multilingual

Various menu languages freely selectable for clear understandability.

PC Simulation

Free Windows software facilitates product trainings, performance tests and technical support.



Network-compatible

Controllers can be networked via CAN bus or connected to the internet.

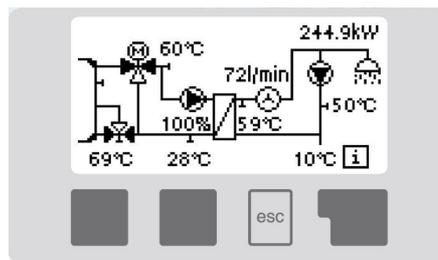
Cascade function

Additional fresh water stations via digital bus system when necessary due to a high amount of water being tapped. This makes a dedicated cascade controller / master controller obsolete.

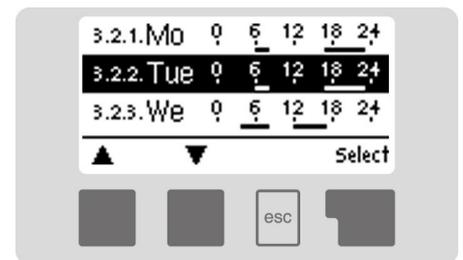
Operator Guidance



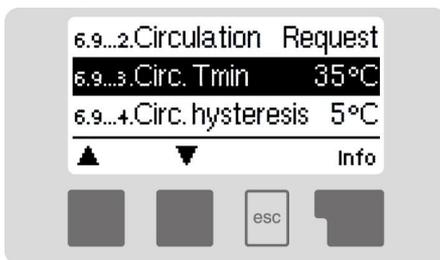
The setup wizard will rapidly guide you through the settings which need to be performed in a logically reasonable sequence. This way, any misadjustment is avoided and the parametrising is simplified.



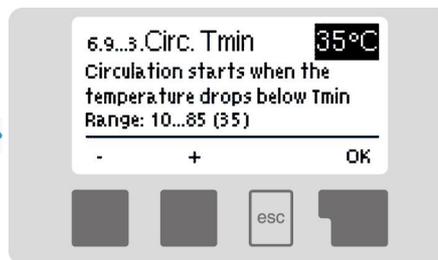
The display of the current measured values and the operating conditions is performed in a graphic mode with animations. Important functions are indicated as icons.



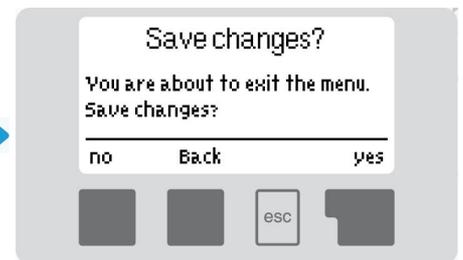
For each day of the week, operating times for circulation can be set and adopted for other days.



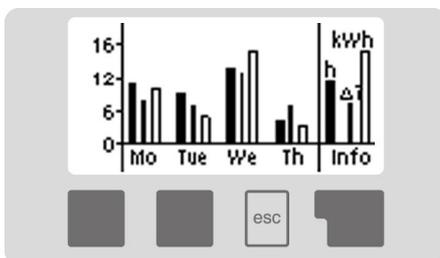
The clear menu offers options for request, analysis and setting.



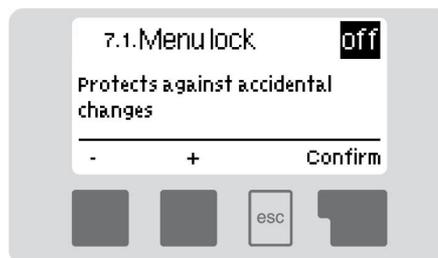
The self explanatory operator guidance allows the simple parametrisation, assisted with functional explanations.



Confirmation dialogs and menu block functions prevent unwanted misadjustments.



The function control and the long term monitoring of the installation is provided by recording and evaluating of the data.



The menu locks protect against unintentional adjustments.



The menu is available in a wide variety of languages.

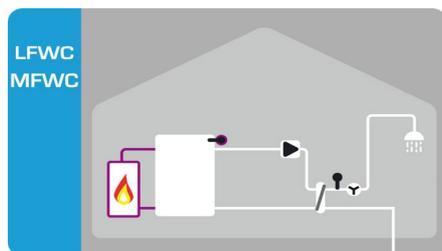
Additional functions for extending predefined schemes

Examples of additional functions

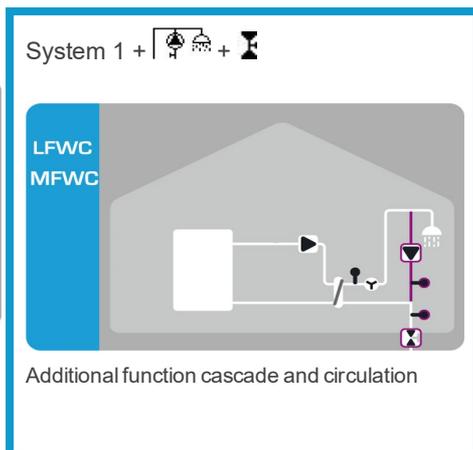
- Circulation
- Primary mixer
- Additional pump
- Parallel operating V1/V2
- Relay always on
- Storage heating
- Storage stratification
- AL heating
- Error message

Example:

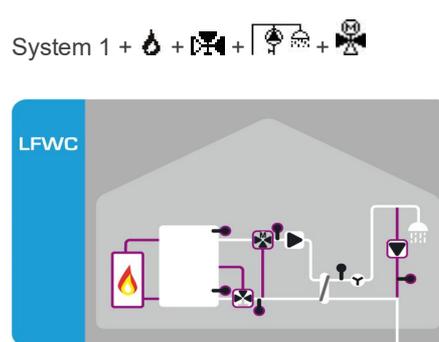
System 1 + 



Additional function storage heating



Additional function cascade and circulation



Additional function primary pre-mixer, circulation, storage stratification and storage heating



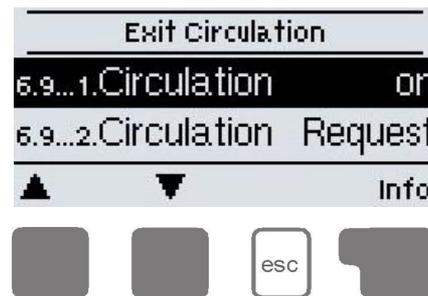
Additional function easily adjusted:



1. Select free relay



2. Select additional function



3. Set function



OEM service: We are happy to contribute our experience from over 10 years of fresh water development in order to optimally adjust all control parameters for your fresh water station - for a fast and stable tap temperature in all common tap profiles.

Fresh Water Controllers

The controllers of the FWC series enable fast and precise regulation of the tap temperature in central fresh water stations. The heat from a storage is transferred to the tap water circuit via a heat exchanger using the continuous flow principle and thus provided precisely tempered and legionella-free water at the taps.



FWC	SFWC	MFWC	LFWC
Sensor inputs Pt1000	2	6	5 + 3*
Sensor inputs VFS / VVX / VTY sensor	1	1	1
Relay outputs 230V	1	3	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1	2	3 + 1*
Number of applications	2	9	12
Extension of pre-defined systems by selectable additional functions	✓	✓	✓
LEDs red/green for display of operating status	✗	✓	✓
Statistics and graphic analysis of data memory	✓	✓	✓
Flow based heat metering via Grundfos direct sensor (VFS)	✓	✓	✓
Pressure monitoring via Grundfos direct sensor (RPS)	✗	✓	✓
Battery-backed Real Time Clock > 24h	✓	✓	✓
Time and temperature-controlled thermostat function	✗	✓	✓
Time and Temperature-controlled circulation pump switch	✓	✓	✓
Switch for zone valve for optimized storage layering	✗	✓	✓
Pre-regulation of the primary circuit Temperature by three-way mixer	✗	✗	✓
Anti-legionella function	✓	✓	✓
Legionella protection via additional heating	✗	✓	✓
Setup wizard	✓	✓	✓
Solar-System protection	✗	✗	✓
Discharge protection	✓	✓	✓
Function control and error memory with date and time	✓	✓	✓
Menu blocker	✓	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✗	✓	✓
CAN bus connection for SOREL Connect	✗	✓	✓
Data logging on microSD card	✗	via data logger	via data logger
Ethernet connection	✗	via data logger	via data logger
Cascade function	✗	✓	✓
Dimensions Height x Width x Depth in mm	163 x 110 x 51	163 x 110 x 51	163 x 110 x 51
Housing colour	RAL 9003	RAL 9003	RAL 9003
Protection Class	IP40	IP40	IP40
Mounting Hardware, Spare Fuse and User Manual	✓	✓	✓
Product details	Page 33	Page 34	Page 35

* on extension plug

SFWC - Small Fresh Water Controllers

The controller for small fresh water stations with speed-controlled high-efficiency pump.

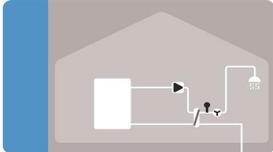
Inputs / Outputs



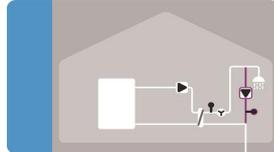
Menu Languages



Hydraulic variants SFWC



Basic scheme



Additional function circulation

Recommended Accessories

WX/ VFS/ RPS
Combined sensor



→ Page 63

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

Pre-wiring



→ Page 70

List Prices

Note: Sales only to manufacturers of fresh water systems.

Art. No. 47001 - SFWC

on request

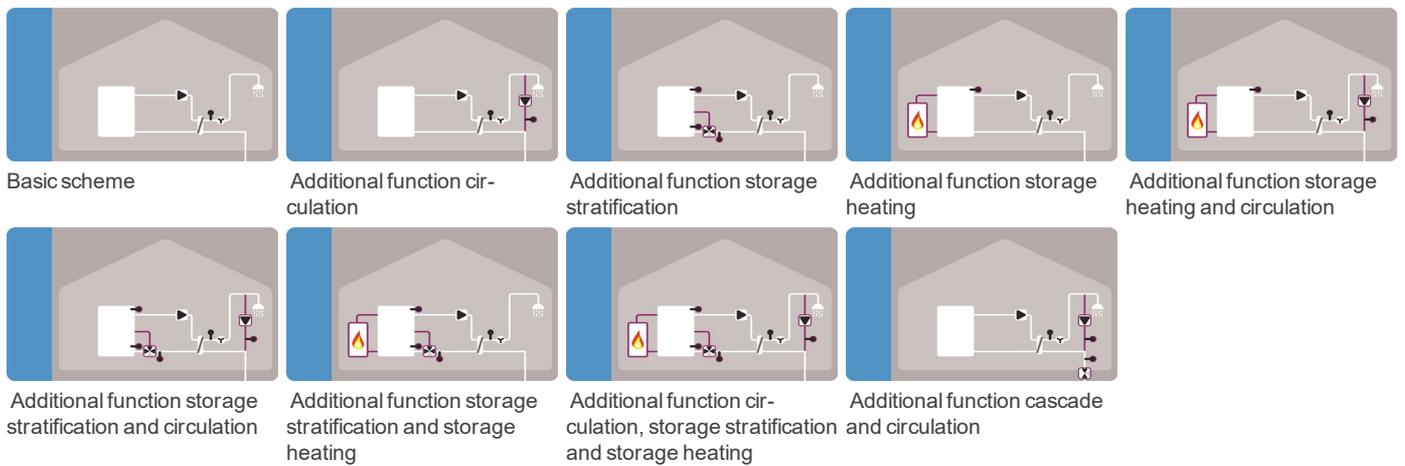
MFWC - Medium Fresh Water Controllers

Universal controller for fresh water stations with speed-controlled high-efficiency pump and selectable additional functions like control of circulation pump.



Inputs / Outputs	Connectivity	Menu Languages
<ul style="list-style-type: none"> 6x Pt1000 3x 230 VAC 1x WX/VFS/VTY 1x 230 VAC 2x 0-10V/PWM 	<ul style="list-style-type: none"> Data logger 	

Hydraulic variants MFWC



Recommended Accessories

Data logger



→ Page 59

WX/ VFS/ RPS Combined sensor



→ Page 63

Temperature sensors Pt1000



→ Page 61

CAN Connection set



→ Page 59

List Prices

Note: Sales only to manufacturers of fresh water systems.

Art. No. 47003 - MFWC
on request

LFWC - Large Fresh Water Controllers

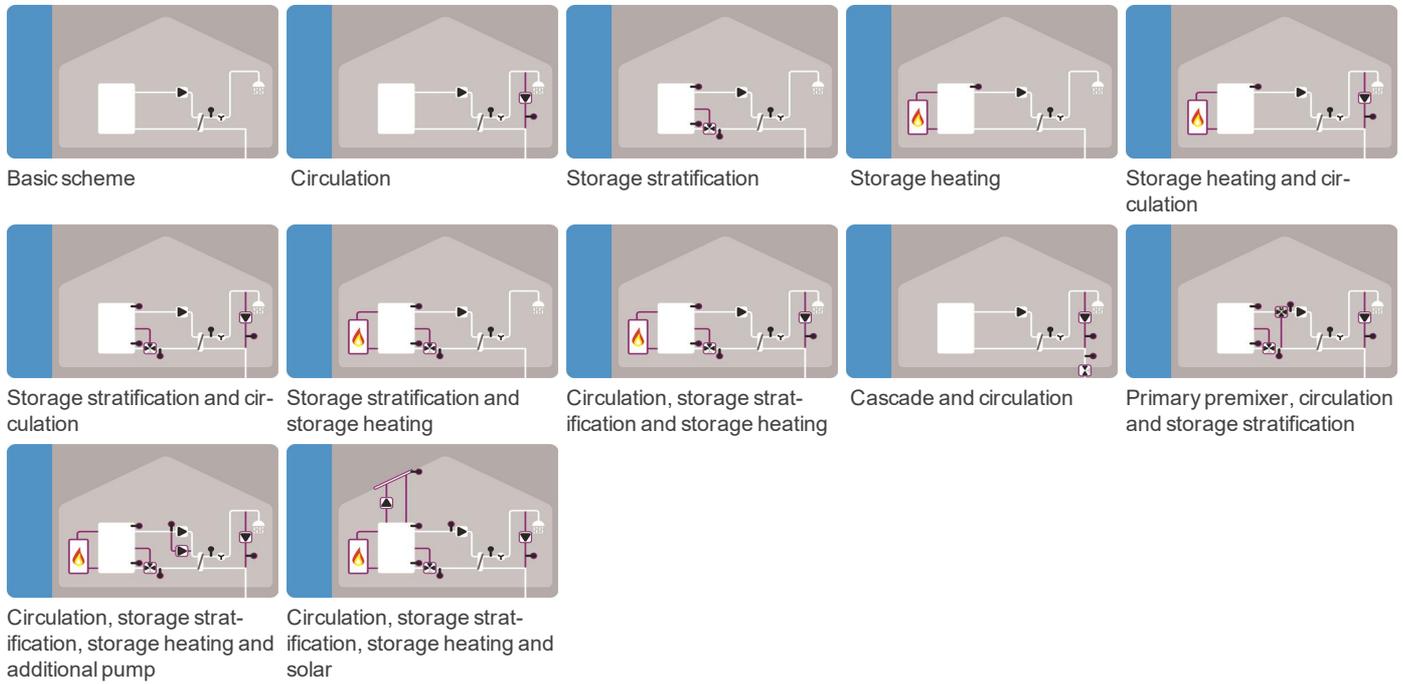
For large fresh water stations with speed-controlled high-efficiency pump and selectable additional functions like pre-control of primary Temperature, storage zone valve, additional control of circulation pump and one Solar pump.



* on extension plug

Inputs / Outputs	Connectivity	Menu Languages	New: additional sensors and 0-10V/PWM outputs.
<ul style="list-style-type: none"> 5 + 3+ Pt1000 4x 230 VAC 1x VVX/VFS/VTY 1x 230 VAC 3 + 1+ 0-10V/PWM 	<ul style="list-style-type: none"> Data logger 		

Hydraulic variants LFWC



Recommended Accessories

Data logger



→ Page 59

VVX/ VFS/ RPS Combined sensor



→ Page 63

Temperature sensors Pt1000



→ Page 61

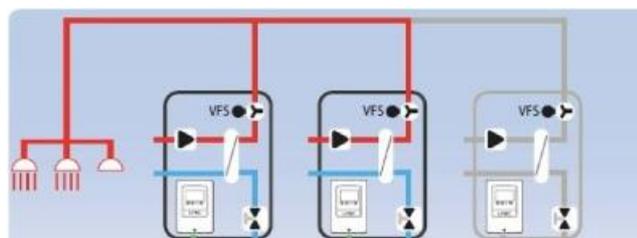
List Prices

Art. No. 47007 - LFWC

on request

Note: Sales only to manufacturers of fresh water systems.

Cascade function



The Cascade function uses the digital bus on the MFWC or LFWC to switch on additional fresh water stations in case of high tapping activity. No additional master or cascade controller is necessary.

SFWC for heat interface units

Decentralised Fresh water controller for heat interface units with precise control for fast hot water valves and additional warm-keeping function for summer operation.

SFWC for heat interface units

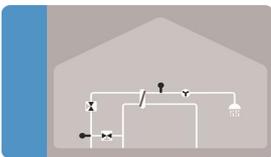
Inputs / Outputs	Menu Languages
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">3x Pt1000</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">1x 230 VAC</div> </div>	
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">1x WX/VFS/VTY</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">1x 0-10V/PWM</div> </div>	



SFWC (24VAC/DC) for heat interface units

Inputs / Outputs	Menu Languages
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">3x Pt1000</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">1x 230 VAC</div> </div>	
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">1x WX/VFS/VTY</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">2x 0-10V/PWM</div> </div>	
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">1x PWM</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">1x 24V</div> </div>	

Hydraulic variants SFWC for heat interface units



Valve for hot water standby and temperature and flow sensors

Recommended Accessories

WX/ VFS/ RPS
Combined sensor



→ Page 63

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

Pre-wiring



→ Page 70

List Prices

Note: Sales only to manufacturers of fresh water systems.

Art. No. 47021 - SFWC for heat interface units

on request

Art. No. 47024 - SFWC (24VAC/DC) for heat interface units

on request

HCC Fresh

Weather-compensated heating circuit controller with fresh water function for heat interface units. Optionally with cooling function, circulation pump control, warm-keeping function and systemwide DHW priority function.

Inputs / Outputs	Connectivity	Menu Languages
5+3* Pt1000 4x 230 VAC 1x VFS/VWX/VTY 1x 230 VAC 3+1* 0-10V/PWM	°CALEON °caleon box	



* on extension plug

Hydraulic variants HCC Fresh



Recommended Accessories

°CALEON Room Controller



→ Page 12

°CALEON Clima Room Controller



→ Page 13

Data logger



→ Page 59

CAN connection set



→ Page 59

Temperature sensors Pt1000



→ Page 61

List Prices

Art. No. 27008 -HCCFresh
on request



OEM service: We are happy to contribute our experience from over 10 years of fresh water development in order to optimally adjust all control parameters for your fresh water station - for a fast and stable tap temperature in all common tap profiles.

Additional contents

Optimising Heat Interface Units with Electronic Controls
 → <https://sorel.de/en/electronic-heat-interface-unit-blog/>

TDC Solar Controllers

Temperature difference controllers by SOREL: versatile and easy to use. Thanks to the crystal clear user guidance, different types of solar systems can be operated intuitively - from small to complex.

Full Text Menu

Context dependant help texts explain every setting for easy understanding.

Setup Wizard

Guides step by step through all necessary settings for quick and easy commissioning.

Graphic Display

Animated system visualisation, illustrative heating curves and energy statistics.

Modular System

By activating additional functions via free relays, the basic systems can be extended easily and flexibly.

Multilingual

Various menu languages freely selectable for clear understandability.

PC Simulation

Free Windows software facilitates product trainings, performance tests and technical support.



Network-compatible

Controllers can be networked via CAN bus or connected to the internet.

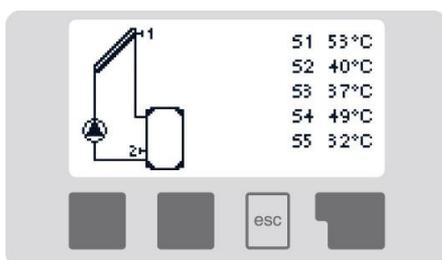
CAN-Bus

For internet connection via data logger or to system optimization by communication with our heating controllers.

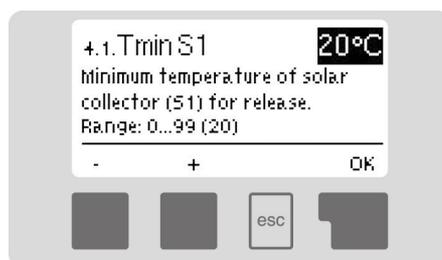
Operator Guidance



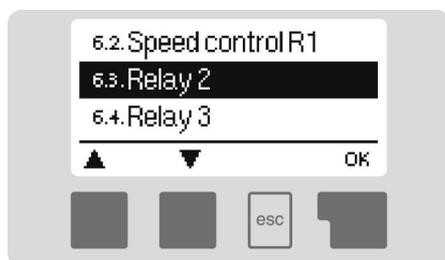
The setup wizard will rapidly guide you through the settings which need to be performed in a logically reasonable sequence. This way, any misadjustment is avoided and the parametrising is simplified.



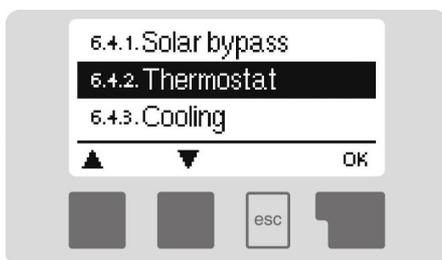
The display of the current measured values and the operating conditions is performed in a graphic mode with animations. Important functions are indicated as icons.



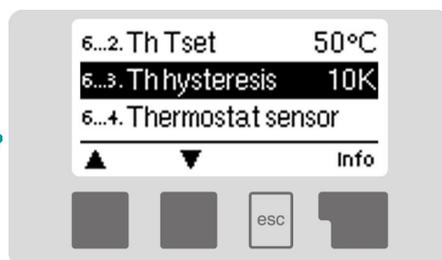
Setup with full text explanation



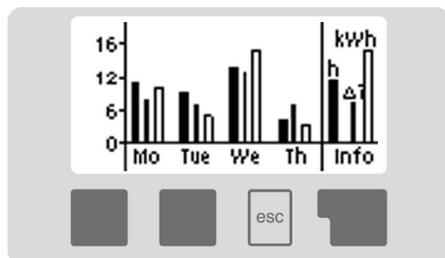
Configuration additional function: Select relay



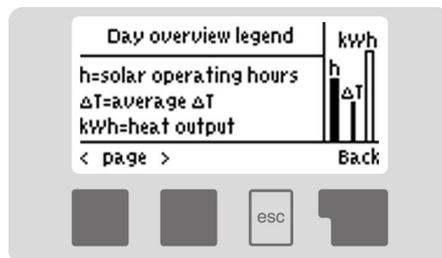
Selecting additional function



Setup of additional function thermostat



The function control and the long term monitoring of the installation is provided by recording and evaluating of the data.



Graphical analysis legend

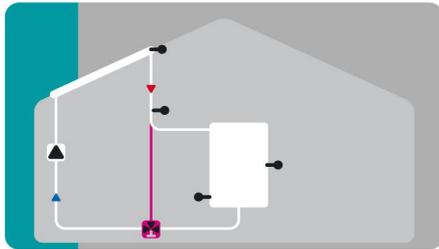
Additional functions for extending predefined schemes

Examples of additional functions

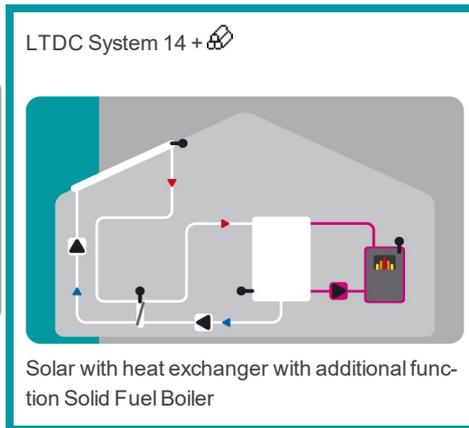
- Temp. Difference
- Booster pump
- Cooling function
- Heat circuit
- Solid fuel boilers
- Solar bypass
- Storage transfer
- Anti-legionella
- Error message
- Parallel operating
- Return flow increase
- Relay always on

Example:

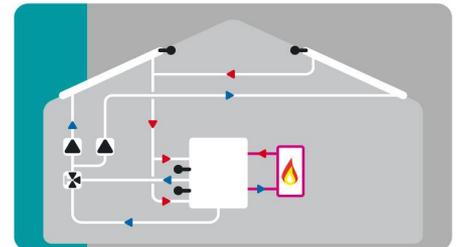
MTDC System 1 + 



Solar with storage and additional solar bypass function



XTDC System 20 + 



Solar with 2 zone storage and switching valve with additional function Thermostat



Additional function easily adjusted:

```
6.3.Speed control R1
6.4.Relay 1
6.5.Relay 2 Thermostat
▲ ▼ OK
```



1. Select free relay

```
6.4.8.Difference
6.4.9.Solid fuel boiler
6.4.10.Error message 1
▲ ▼ OK
```



2. Select additional function

```
6.4...1.Solid fuel boiler on
6.4...2.SF Tmin 60°C
6.4...3.ΔT solid fuel 8°C/4°C
▲ ▼ Info
```



3. Set function

Temperature Difference Controllers TDC



TDC	STDC	MTDC
Sensor inputs Pt1000	3	4
Relay outputs 230V	1	2
Relay output voltage-free	✗	✗
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1	1
Number of applications	9	25+
Extension of pre-defined systems by selectable additional functions	✗	✓
LEDs red/green for display of operating status	✗	✓
Statistics and graphic analysis of data memory	✓	✓
Flow based heat metering via Grundfos direct sensor (VFS / VVX)	✗	✗
Pressure monitoring via Grundfos direct sensor (RPS)	✗	✗
Battery-backed Real Time Clock > 24h	✓	✓
Time and temperature-controlled thermostat function	✓	✓
Ventilation flap function	✗	✗
Legionella function via solar	✓	✓
Legionella protection via additional heating	✓	✓
Cooling function	✓	✓
Setup wizard	✓	✓
System protection	✓	✓
Collector protection	✓	✓
Storage protection (KS-Tmax)	✓	✓
Anti-freeze protection	✓	✓
Recooling	✓	✓
Start logic for vacuum tube collectors	✓	✓
Control program for self-dumping systems (drain-back)	✓	✓
Function control and error memory with date and time	✓	✓
Menu blocker	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✗	✓
CAN bus connection for SOREL Connect	✗	✓
Data logging on microSD card	✗	via data logger
Ethernet connection	✗	via data logger
Dimensions Height x Width x Depth in mm	163 x 110 x 51	163 x 110 x 51
Housing colour	RAL 9003	RAL 9003
Protection Class	IP40	IP40
Mounting Hardware, Spare Fuse and User Manual	✓	✓
Product details	Page 42	Page 43

STDC - Small Temperature Difference Controller

Single circuit controller for simple systems with 1 storage.



Inputs / Outputs		Menu Languages
3x Pt1000	1x 230 VAC	
1x 0-10V/PWM		

Hydraulic variants STDC

Solar with storage	Solar with pool	Solid fuel boiler with storage	Storage transfer	Return flow increase
Thermostat function	Universal Delta T	Shut-off valve	Solar with heat exchanger (sensor in the secondary circuit) and pool	

Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

List Prices

Art. No. 10003 -STDC					Art. No. 10203 -STDCwith 2 sensors TT/ S2 PT1 000				
from quantity	1	10	20	40	from quantity	1	10	20	40
Art. No. 10203 -STDCwith 3 sensors TT/ S2 PT1 000									
from quantity	1	10	20	40					

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

SOREL GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

MTDC - Temperature Difference Controllers

Dual circuit controller for solar systems with 1-2 storage tanks or second heat source.



Inputs / Outputs	Connectivity	Menu Languages
4x Pt1000 2x 230 VAC 1x 0-10V/PWM	Datalogger	

Hydraulic variants MTDC - Includes STDC variants plus:

Solar with thermostat (additional heating)	Solar with 2 zones storage	Solar with heating circuit	Solar with bypass	Solar with heat exchanger
Solar with 2 collector surfaces	Solar with 2 collector surfaces and 2 pumps	Solar with 2 storages and 2 pumps	Solar with 2 storages and valve	Solar with heat exchanger
Solar with pool and heat exchanger	Solar with thermostat and valve	Solar with solid fuel boiler	Solar with cooling 1 (Coll. cooling)	Solar with cooling 2 (coll. cooling)
Solar with cooling 3 (storage cooling)				

Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

Data logger



→ Page 59

Art. No. 16005 -MTDC				
from quantity	1	10	20	40
Art. No. 16305 -MTDCwith3 sensors TT/ S2 PT1 000				
from quantity	1	10	20	40

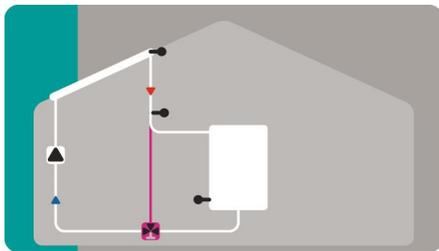
Art. No. 16205 -MTDCwith2 sensors TT/ S2 PT1 000				
from quantity	1	10	20	40

MTDC - Additional functions for free relays

- Solar bypass
- Backup heating control
- Cooling function
- Collector field cooling
- Return flow increase
- Anti-legionella function
- Storage transfer
- Universal DeltaT
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Booster for fast system loading
- Always on
- Pressure monitoring
- Parallel operating with R1
- Parallel operating with R2
- Thermostat 2
- Heat circuit

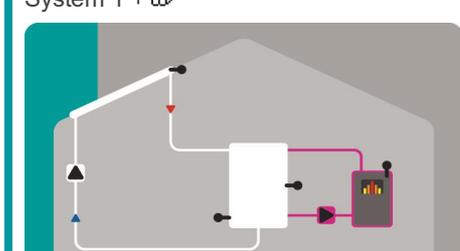
Example:

System 1 + ☒



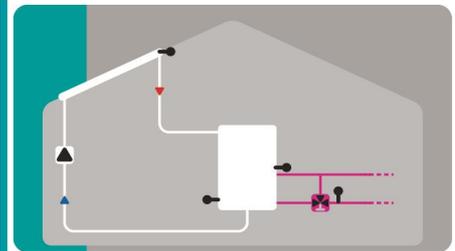
Solar with storage and additional solar bypass function

System 1 + ☒



Solar with storage and additional function solid fuel boiler

System 1 + ☉



Solar with storage and additional return flow boosting function



Additional function easily adjusted:

```

6.3.Speed control R1
6.4.Relay 1
6.5.Relay 2 Thermostat
▲ ▼ OK
    
```



1. Select free relay

```

6.4.8.Difference
6.4.9.Solid fuel boiler
6.4.10.Error message 1
▲ ▼ OK
    
```



2. Select additional function

```

6.4...1.Solid fuel boiler on
6.4...2.SF Tmin 60°C
6.4...3.ΔT solid fuel 8°C/4°C
▲ ▼ Info
    
```



3. Set function

Art. No. 17003 -LTDC				
from quantity	1	10	20	40
Art. No. 17403 -LTDCwith 4 sensors TT/ S2 PT1000				
from quantity	1	10	20	40

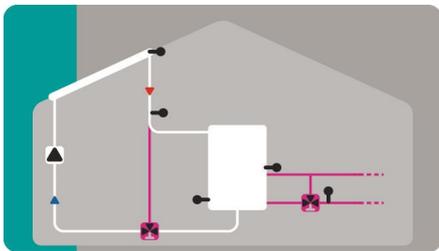
Art. No. 17303 -LTDCwith 3 sensors TT/ S2 PT1000				
from quantity	1	10	20	40
Art. No. 17503 -LTDCwith 5 sensors TT/ S2 PT1000				
from quantity	1	10	20	40

LTDC - Additional functions for free relays

- Solar bypass
- Backup heating control
- Cooling function
- Collector field cooling
- Return flow increase
- Anti-legionella function
- Storage transfer
- Universal DeltaT
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Booster for fast system loading
- Always on
- Pressure monitoring
- Parallel operating with R1
- Parallel operating with R2
- Thermostat 2
- Heat circuit

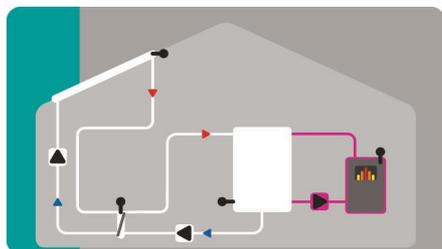
Example:

System 1 + ☉ + ⌘



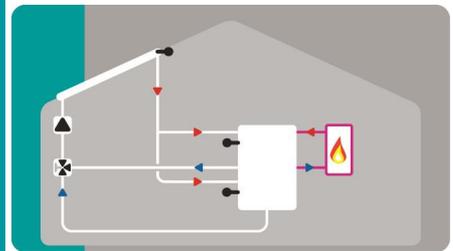
Solar with storage with additional functions Solar Bypass and Return Flow Increase

System 2 + ☉



Solar with heat exchanger with additional function Solid Fuel Boiler

System 10 + ☉



Solar with 2 zone storage and switching valve with additional function Thermostat



Additional function easily adjusted:

```

6.3.Speed control R1
6.4.Relay 1
6.5.Relay 2 Thermostat
    
```

```

6.4.8.Difference
6.4.9.Solid fuel boiler
6.4.10.Error message 1
    
```

```

6.4...1.Solid fuel boiler on
6.4...2.SF T min 60°C
6.4...3.ΔT solid fuel 8°C/4°C
    
```



1. Select free relay

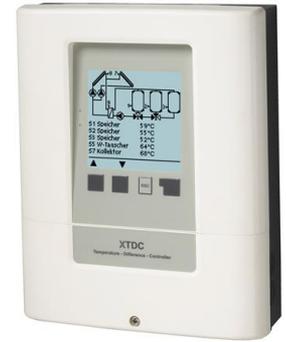
2. Select additional function

3. Set function

XTDC- XtraLarge Temperature Difference Controller

Multi-circuit controller for complex solar systems

Inputs / Outputs		Connectivity	Menu Languages
8x Pt1000	8x 230 VAC		
2x VVX/VFS/RPS	2x 0-10V/PWM		
1x RC20	1x Potenzialfrei		



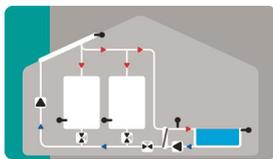
Hydraulic variants XTDC

Solar with storage	Solar with heat exchanger	Solar with pool	Solar with pool and heat exchanger	Solar with 2 collector surfaces and 2 pumps
Solar with 2 collector surfaces with 2 pumps, 1 storage, heat exchanger and Pump	Solar with 2 collector surfaces and switchingvalve	Solar with 2 collector surfaces, switching valve and heat exchanger	Solar with 2 storages and switching valve	Solar with two-zone storage and switching
Solar with 2 storages and 2 pumps	Solar with 2 storages and 2 stop valves	Solar with 2 storages, 2 pumps and heat exchanger	Solar with 2 storages, 2 stop valves	Solar with two-zone storage and stop valve
Solar, storage, pool and heat exchanger	Solar with 2 storages and switching valve heat exchanger	Solar with two-zone storage and switching valve heat exchanger	Solar with 2 collector surfaces, 2 storages, 2 pumps and switching valve	Solar with 2 collector surfaces, two-zone storage, 2 pumps and switching valve
Solar with 2 collector surfaces with 2 pumps, 2 storages, heat exchanger and pump	Solar with 2 collector surfaces, 2 storages and 2 switching valves	Solar with 2 collector surfaces with valve, 1 pump, 2 storages, heat exchanger and pump	Solar with 3 storages and 2 switching valves	Solar with 3 storages and 3 pumps
Solar with 3 storages and 3 stop valves	Solar with 3 storages, 3 pumps and heat exchanger	Solar with 3 storages, 3 stop valves and heat exchanger	Solar with three-zone storage, 3 stop valves and heat exchanger	Solar with 2 storages, switching valves and swimming pool with heat exchanger

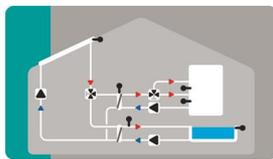
Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

SOREL GmbH, Reme-Strasse 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

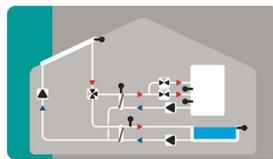
Hydraulic variants XTDC



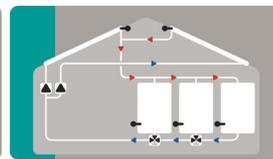
Solar with 2 storages, 3 stop valves and swimming pool with heat exchanger



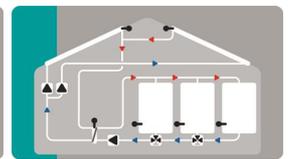
Solar with 2 storages, switching valve, heat exchanger and pool with heat exchanger



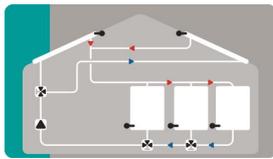
Solar with 2 two-zone storage, 2 stop valves, heat exchanger and pool with heat exchanger



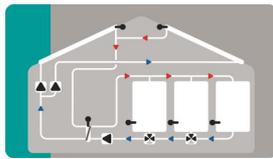
Solar with 2 collector surfaces and 3 storages with 2 switching valves



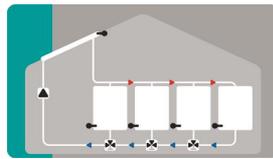
Solar with 2 collector surfaces, 3 storages with 2 switching valves and heat exchanger



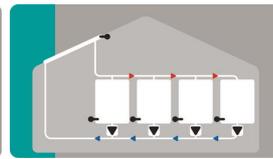
Solar with 2 collector surfaces with 1 valve, 1 pump, 3 storages with valves



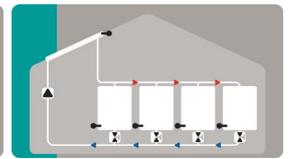
Solar with 2 collector surfaces with 2 pumps, 3 storages, heat exchanger and pump



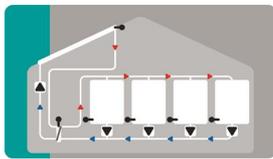
Solar with 4 storages and 3 valves



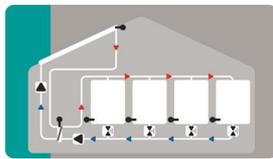
Solar with 4 storages and 4 pumps



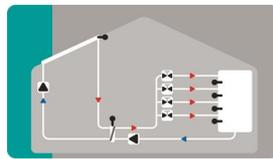
Solar with 4 storages and 4 stop valves



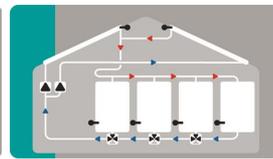
Solar with 4 storages, 4 pumps and heat exchanger



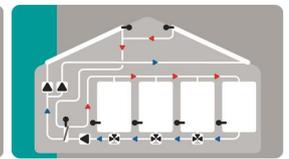
Solar with 4 storages, 4 stop valves and heat exchanger



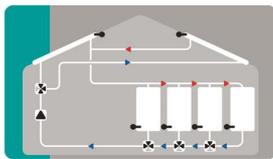
Solar with four-zone storage and 4 stop valves



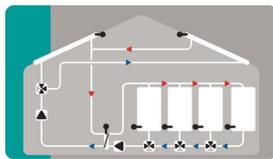
Solar with 2 collector surfaces, 4 storages, 2 pumps and 3 switching valves



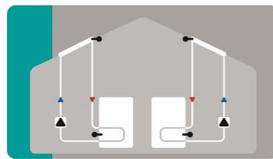
Solar with 2 collector surfaces, 4 storages, 2 pumps, 3 switching valves and heat exchanger



Solar with 2 collector surfaces, 4 storages and 3 switching valves



Solar with 2 collector surfaces, 4 storages and 3 switching valves and heat exchanger



2 x Solar

Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

System-Dependent
Pre-Parametrisation



→ Page 71

Immersion sleeves



→ Page 62

VWX/ VFS/ RPS
Combined sensor



→ Page 63

List Prices

Art. No. 18001 -XTDC

from quantity	1	10	20	40
---------------	---	----	----	----

Art. No. 18002 -XTDCwith Ethernet incl. SOREL Connect

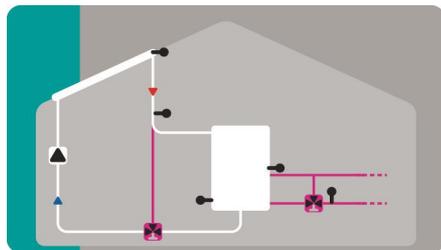
from quantity	1	10	20	40
---------------	---	----	----	----

XTDC - Additional functions for free relays

- Solar bypass
- Backup heating control
- Cooling function
- Collector field cooling
- Return flow increase
- Anti-legionella function
- Storage transfer
- Universal DeltaT
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Booster for fast system loading
- Always on
- Pressure monitoring
- Parallel operating with R1
- Parallel operating with R2
- Thermostat 2
- Heat circuit

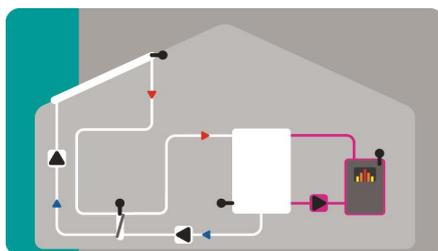
Example:

System 1 + ☉ + 🏠



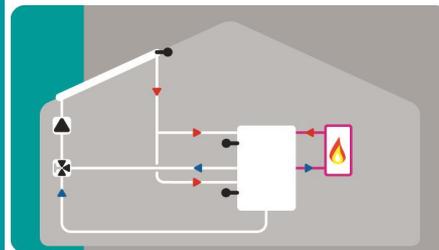
Solar with storage with additional functions
Solar Bypass and Return Flow Increase

System 2 + 🏠



Solar with heat exchanger with additional function
Solid Fuel Boiler

System 10 + 🔥



Solar with 2 zone storage and switching valve
with additional function Thermostat



6.Special functions

Can special functions

- 1.Program selection
 - 2.Speed control R1
 - 4.Relay 3
 - 5.Relay 4 Thermostat 2
 - 6.Relay 5 Thermostat
 - Relay 6
- ▲ ▼ OK

1. Select free relay

Additional function easily adjusted:

6.4. Relay 3

1. Anti-legionella
 - 8.Heat transfer
 - 9.Difference
 - 10.Solid fuel boiler
 - 11.Error message
 - 12.Pressure control
 - Booster
- ▲ ▼ OK

2. Select additional function

6.4.10.Solid fuel boiler

- 1.Solid fuel boiler on
 - 2.SF Tmin 60°C
 - 3.ΔT solid fuel 8/4°C
- ▲ ▼ Info

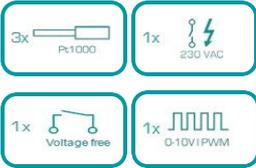
3. Set function

MTDC-E - Temperature Difference Controller

For basic solar systems with electric backup heating up to 3kW.



Inputs / Outputs

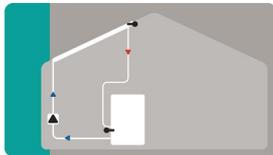


Menu Languages

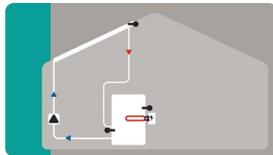


New: suitable for high-efficiency pumps and with additional hydraulic variant.

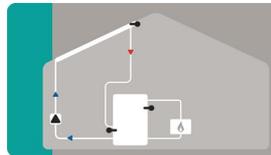
Hydraulic variants MTDC-E



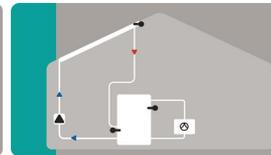
Solar with storage



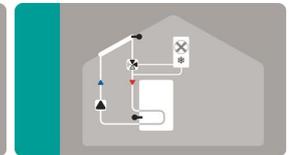
Solar, storage and electric heating rod



Solar, storage and gas boilers



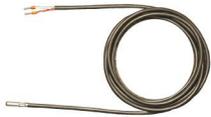
Solar, storage and Heat pump



Solar with storage and Cooling

Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

List Prices

Art. No. 16006 -MTDCE

from quantity	1	10	20	40
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Art. No. 16206 -MTDCEwith2 sensors TT/ S2 PT1000

from quantity	1	10	20	40
---------------	---	----	----	----

Art. No. 16306 -MTDCEwith3 sensors TT/ S2 PT1000

from quantity	1	10	20	40
---------------	---	----	----	----

LTDC-E - Temperature Difference Controller

For basic solar systems with electric backup heating up to 3kW and control of circulation pump.



Inputs / Outputs	Menu Languages
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">4x Pt1000</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">2x 230 VAC</div> </div>	
<div style="border: 1px solid black; padding: 5px; text-align: center;">1x 0-10V/PWM</div>	
<div style="border: 1px solid black; padding: 5px; text-align: center;">1x Voltage free</div>	

Hydraulic variants LTDC

Solar with storage	Solar, storage and electric heating rod	Solar, storage and gas boilers	Solar, storage and Heat pump	Solar, storage and Circulation
Solar with storage, immersion heater and circulation	Solar with storage, gas boiler and circulation	Solar with storage, heat pump and circulation		

Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

External switching relay
4S24A



→ Page 63

List Prices

Art. No. 16007 -LTDC-E					Art. No. 16307 -LTDC-Ewith3 sensors TT/ S2 PT1000				
from quantity	1	10	20	40	from quantity	1	10	20	40
Art. No. 16407 -LTDC-Ewith4 sensors TT/ S2 PT1000									
from quantity	1	10	20	40					

Pump groups without TDC Controllers

S1-Solar-1

Completely pre-assembled and tested pump groups 3/4" with solar pump and safety assembly



- High-efficiency pump WILO Yonos Para ST 25/6 iPWM
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Working temperature 120 °C (short-term 160 °C)

Art. No. 71111 -S1-Solar-1 3/ 4"AG

Art. No. 71111

S2-Solar-2

Completely pre-assembled and tested pump groups 3/4" with solar pump and safety assembly



- High-efficiency pump WILO Yonos Para ST 25/6 iPWM
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Distance between supply and return 125 mm
- Working temperature 120 °C (short-term 160)

Art. No. 72211 -S2-Solar-2 3/ 4"AG

Art. No. 72211

S2-Solar-3 with vent pipe

Completely pre-assembled and tested pump groups 3/4" with solar pump and safety assembly



- High-efficiency pump WILO Yonos Para ST 25/6 iPWM
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Distance between supply and return 125 mm
- Working temperature 120 °C (short-term 160)
- Vent pipe

Art. No. 72311 -S2-Solar-3 3/ 4"AG

Art. No. 72311

Auxiliary equipment for all Solar groups

Wall fixture for expansion tanks for all solar groups

Art. No. 77301

Stainless steel flex pipe 0,5 m for expansion tank for all solar groups

Art. No. 77401

Pump groups with TDC Controllers

S1-Solar-10

Completely pre-assembled and tested single strand pump group 3/4" with pump and safety assembly and solar controller STDC



- High-efficiency solar pump WILO Yonos Para ST 25/6 iPWM
- STDC wired ready to plug in and tested, including 2 sensors
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Working temperature 120 °C (short-term 160)

Art. No. 61103 - S1-Solar-10 pump group + STDC
+ HE Pumpe WILO Yonos Para ST 25/6 iPWM

from quantity	1	5	10	20
---------------	---	---	----	----

S2-Solar-30

Completely pre-assembled and tested solar station 3/4" with pump, safety assembly, breather tube and solar controller MTDC



- High-efficiency solar pump WILO Yonos Para ST 25/6 iPWM or WILO Yonos Para ST 25/13 PWM
- MTDC or LTDC plugwired and tested, 3 sensors included
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Distance between supply and return 125 mm
- Working temperature 120 °C (short-term 160)

Art. No. 63163 - S2-Solar-30 pump group 3/4"AG + MTDC + HE
Pumpe WILO Yonos Para ST 25/6 iPWM

from quantity	1	5	10	20
---------------	---	---	----	----

Art. No. 63263 - S2-Solar-30 pump group 1"AG + MTDC + HE Pump
WILO Yonos Para ST 25/13 PWM

from quantity	1	5	10	20
---------------	---	---	----	----

Art. No. 63173 - S2-Solar-30 pump group 3/4"AG + LTDC + HE
Pumpe WILO Yonos Para ST 25/6 iPWM

from quantity	1	5	10	20
---------------	---	---	----	----

Art. No. 63273 - S2-Solar-30 pump group 1"AG + LTDC + HE Pump
WILO Yonos Para ST25/13 PWM

from quantity	1	5	10	20
---------------	---	---	----	----

Pump groups from various manufacturers as well as previous versions with standard pumps are available on request.

Pool TDC M / M+ Pool Controllers

Solar pool controller with optional control of the filter pump for efficient use and function control of the solar or heating system of your pool.



Inputs / Outputs

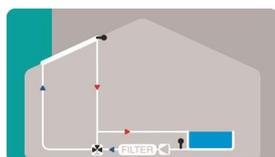


Menu Languages

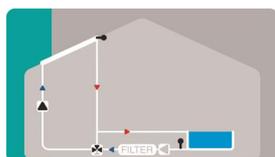


	Pool TDC M	Pool TDC M+
LEDs red/green for display of operating status	✓	✓
Statistics and graphic analysis of data memory	✓	✓
Battery-backed Real Time Clock > 24h	✓	✓
Time and temperature-controlled thermostat function	✓	✓
Setup wizard	✓	✓
Heat request	✓	✓
Filter pump control	✗	✓
Filter pump runtime control (3 times per day)	✗	✓
Temperature-dependent filter pump runtime optimization	✗	✓
Ecomode: Consideration of solar operating times	✗	✓
System protection	✓	✓
Anti-freeze protection	✓	✓
Function control and error memory with date and time	✓	✓
Menu blocker	✓	✓
Dimensions Height x Width x Depth in mm	163mm x 110mm x 51mm	163mm x 110mm x 51mm
Protection Class	IP40	IP40

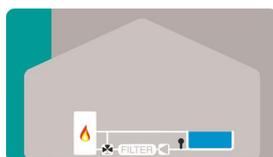
Hydraulic variants Pool TDC M



Pool with solar and ball valve



Pool with solar and additional pump



Pool with additional heating and ball valve

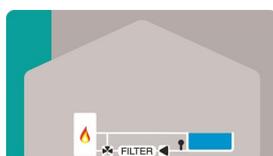
Hydraulic variants Pool TDC M+



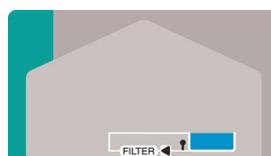
Pool with solar, ball valve and filter pump control



Pool with solar, additional pump and filter pump control



Pool with additional heating, ball valve and filter pump control



Pool with filter pump control

Recommended accessories & list prices

on request

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

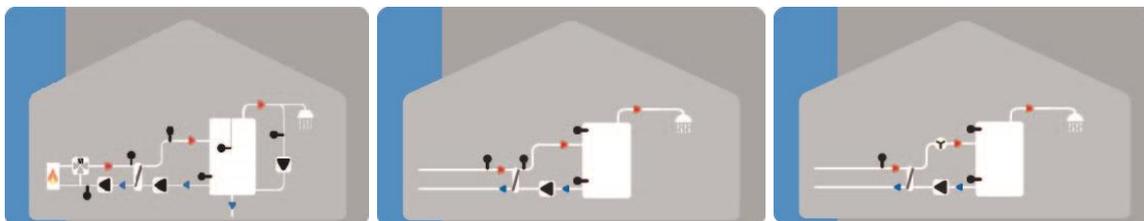
SLC - Storage Loading Controller

For temperature-accurate charging of large domestic hot water tanks, in connection with district heating networks, large heat pump systems or boiler cascades.

Inputs / Outputs	Connectivity	Menu Languages	New: function primary mixer integrated
 6x Pt1000  4x 230 VAC	 Data logger 	 	
 2x VVX/VFS/VTY  2x 0-10V/PWM			
 1x 230 VAC			



Hydraulic variants SLC



Recommended Accessories

Data logger



→ Page 59

VVX / VFS / RPS
Combined sensor



→ Page 63

Temperature sensors
Pt1000



→ Page 61

List Prices

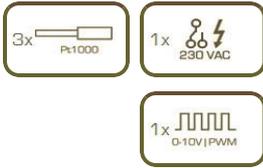
Art. No. 47008 - SLC				
from quantity	1	5	10	20

SBMC - Small Biomass Controller

Controller with specially adapted speed control for heating systems with solid fuel boilers. Ensures constant charging temperature even during the start-up phase.



Inputs / Outputs



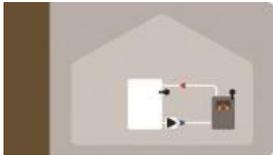
Menu Languages



Technical Data

Battery-backed Real Time Clock > 24h	✓
Setup wizard	✓
Statistics and graphic analysis of data memory	✓
Anti-legionella function	✓
Seizing Protection	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Constant charging temperature through speed optimisation of the high-efficiency pump	✓
Dimensions Height x Width x Depth in mm	115mm x 86mm x 45mm
Protection Class	IP40

Hydraulic variants SBMC



Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

List Prices

Art. No. 10008 -SBMC					Art. No. 10208 -SBMCSet with 2 sensors TT/ S2 PT1000				
from quantity	1	10	20	40	from quantity	1	10	20	40
Art. No. 10308 -SBMCSet with 3 sensors TT/ S2 PT1000									
from quantity	1	10	20	40					

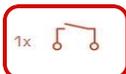
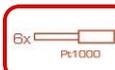
Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

SOREL GmbH, Reme-Strasse 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

WPC5 - Heat Pump Controller

Weather-compensated heat pump controller for 5 different heat pump systems with sole pump, compressor and heating circuit. Evaluation of external fault messages and EVU lock possible. Optionally also with domestic hot water and buffer storage.

Inputs / Outputs



Menu Languages



Further heat pump applications with additional functions such as heating and cooling, second heat source and more see also: LHCC page 23, XHCC page 25.



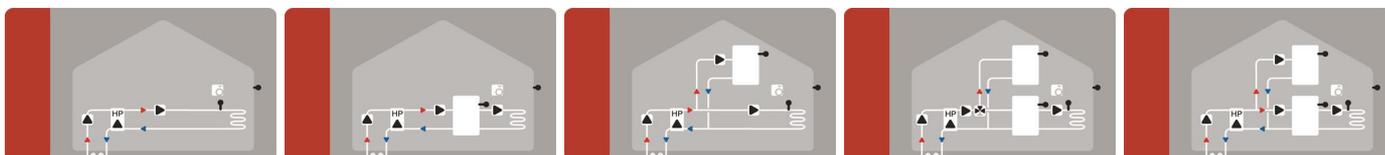
For HP manufacturers, we are happy to develop customised solutions on an OEM basis.

Please contact us: oem@sorel.de

Technical Data

LEDs red/green for display of operating status	✓
Battery-backed Real Time Clock > 24h	✓
Setup wizard	✓
Statistics and graphic analysis of data memory	✓
Seizing Protection	✓
Anti-freeze protection	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Dimensions Height x Width x Depth in mm	163mm x 110mm x 51mm
Protection Class	IP40

Hydraulic variants WPC



Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

List Prices

Art. No. 35000 -WPC5					Art. No. 35500 -WPC5 with 1 sensor TA55 PT1000 and 4 sensors TT/ S2 PT1000				
from quantity	1	5	10	20	from quantity	1	5	10	20

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

SOREL GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

SOREL Connect - Monitoring and Analysis

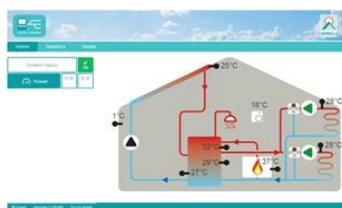


SOREL Connect Controllers enable convenient system monitoring and data logging.

SOREL Connect is the Plug & Play concept which does not require any particular network skills. Using a CAN-bus interface, the controllers can communicate with each other, or be connected with the Internet or via Ethernet. The user can monitor the system at any time and from any location via PC, tablet and smartphone.



Key features (depending on version): visualisation of the heating system with status messages, Temperatures and heat yield statistics (only XHCC), influence the room temperature, activation of comfort boost (HCCs). Data logging is realised by a microSD card, so that all system data can be recorded and analysed extensively.



System overview



Energy statistics (only with active heat quantity measurement)



Temperature curves (only with active heat quantity measurement)

Message Log	Event	Priority	Time
Monday, 11.12.2012 03:00	SHCC VHS 1	Info	03:00
Tuesday, 11.12.2012 07:00	Power	Info	07:00
Wednesday, 12.12.2012 07:00	Power	Info	07:00
Thursday, 13.12.2012 07:00	Power	Info	07:00
Friday, 14.12.2012 07:00	Power	Info	07:00
Saturday, 15.12.2012 07:00	Power	Info	07:00
Sunday, 16.12.2012 07:00	Power	Info	07:00
Monday, 17.12.2012 07:00	Power	Info	07:00
Tuesday, 18.12.2012 07:00	Power	Info	07:00
Wednesday, 19.12.2012 07:00	Power	Info	07:00
Thursday, 20.12.2012 07:00	Power	Info	07:00
Friday, 21.12.2012 07:00	Power	Info	07:00
Saturday, 22.12.2012 07:00	Power	Info	07:00
Sunday, 23.12.2012 07:00	Power	Info	07:00
Monday, 24.12.2012 07:00	Power	Info	07:00
Tuesday, 25.12.2012 07:00	Power	Info	07:00
Wednesday, 26.12.2012 07:00	Power	Info	07:00
Thursday, 27.12.2012 07:00	Power	Info	07:00
Friday, 28.12.2012 07:00	Power	Info	07:00
Saturday, 29.12.2012 07:00	Power	Info	07:00
Sunday, 30.12.2012 07:00	Power	Info	07:00
Monday, 31.12.2012 07:00	Power	Info	07:00

Technical details for the expert

Network Principle

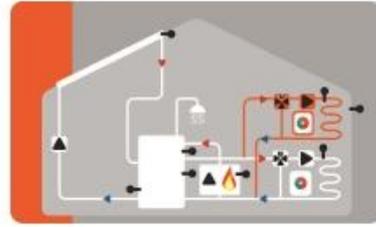


Application example: XHCC with direct Ethernet connection

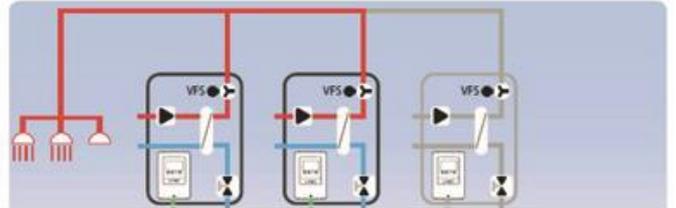


Application example: MHCC with Ethernet connection via data logger

Network Principle



Application example: additional mixed heating circuit and 2 °CALEON Room Controllers



Application example: fresh water cascade



Data logger

For use with MTDC, LTDC, MHCC, LHCC, XHCC, MFWC and LFWC. The set consists of data logger, Micro SD-card, Ethernet interface, wall power supply, 1m CAN connection cable to the controller, licence for SOREL Connect.

Art. No. 77701 -Data logger set incl. power plug and connection cable				
from quantity	1	5	10	20



CAN connection box

CAN connection box for shielded CAN connection cables	
Art. no. 89200	CAN connection box for connecting up to 6 CAN connection set 0.3m shielded twisted pair CAN connection cable 1x2x0.22mm with 2 Molex plugs 2 terminating resistors with Molex plugs for end devices



CAN connection set

CAN connection set for connecting multiple controllers	
Art. no. 89210	CAN connection set 0.3m shielded twisted pair CAN connection cable 1x2x0.22mm with 2 Molex plugs, 2 terminating resistors with Molex plugs for end devices
Art. no. 89211	CAN connection set 1.00m shielded twisted pair CAN connection cable 1 x 2 x 0.22 mm with 2 Molex plugs, 2 terminating resistors with Molex plugs for end devices
Art. no. 89213	CAN connection set 2.90m shielded twisted pair CAN connection cable 1 x 2 x 0.22 mm with 2 Molex plugs, 2 terminating resistors with Molex plugs for end devices
Art. no. 89299	CAN connect set 6-wire by the metre shielded twisted pair CAN connection cable 3 x 2 x 0.22 mm cable length selectable from 1 to 100m. Price per meter.

Room Temperature Sensors



RC21

Optional for MHCC, LHCC and XHCC. Mode switch, heating curve parallel translation via dial and integrated room Temperature sensor.

Art. No. 89021 -RC21 Room temperature sensor and remote adjuster

from quantity	1	5	10	20
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Actuators

ARA661 actuators are used in combination with a heating mixer and are controlled by a 230V 3-point signal from the heating controller to adjust the desired flow Temperature. Compatible controllers: HCC series, LFWC, SLC



Run time at 90° position	2 minutes
Torque	6 Nm
Operating voltage	230VAC 50 Hz
power consumption	5VA
valid temp.of environment	5°C bis 55°C

Actuator ARA661

Art. No. 76901

The new PWM actuators ARA598 are used in combination with a heating mixer and are controlled by a PWM signal from the heating controller to adjust the desired flow Temperature particularly fast and precisely. As a result of the PWM control, 2 relay outputs are set free for additional functions. Compatible controllers: LHCC, XHCC, LFWC, SLC, °CALEONbox and °CALEONbox Clima.



Actuator ARA598 PWM 12-24VDC5W

Art. No. 76900



Temperature sensors

Temperature sensors with PT1000 sensor elements - with guaranteed degree-accuracy according to DIN EN60751 (IEC751) - ensure precise recognition of the temperature difference and optimum use of energy.



Art. No. 85220 -TT/ S2 Temperature immersion sensor with 2 m silicone cable, 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 85240 -TT/ S4 Temperature immersion sensor with 4 m silicone cable, 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 85140 -TT/ P4 Temperature immersion sensor with 4 m PVC cable, 95 °C				
from quantity	1	20	50	100

Art. No. Art. no. 86325 -TT/ T2.5 Temperature immersion sensor with 2,5 m special cable, 220/ 300 °C				
from quantity	1	20	50	100

Art. No. 81220 -TR/ S2 Temperature pipe sensor with 2 m silicone cable, 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 81140 -TR/ P4 Temperature pipe sensor with 4 m PVC cable, 95 °C				
from quantity	1	20	50	100

Art. No. 85216 -TT/ S10 TP6 Temperature immersion sensor with 10 m silicone cable for swimming pool applications				
from quantity	1	20	50	100

Art. No. 85222 -Pt1000 double sensor -TT/ S2.5 temperature immersion sensor with 2.5 m 4-wire silicone cable, 180 °C				
from quantity	1	20	50	100

TA55 Temperature external sensor box



Art. No. 87005 -TA55 Temperature external sensor box				
from quantity	1	20	50	100

Sensors for °CALEONbox

Optional sensors for use with °CALEONbox (see p. 6).



Pipe-mounted Sensor 1-Wire

Art. No. 80101 - Pipe-mounted Sensor 1-Wire 0,6m				
from quantity	1	20	50	100



Floor Temperature Sensor 1-Wire

Art. No. 80102 - Floor Temperature Sensor 1-Wire 2m				
from quantity	1	20	50	100



Outdoor Sensor 1-Wire

Art. No. 87006 -TA56 Outdoor Sensor 1-Wire				
from quantity	1	20	50	100

Immersion sleeves

Immersion sleeves R 1/2" with PG7 cable threading and silicone seal, in various lengths and designs:



Art. No. Art. no. 901030 -TH30 with 30 mm brass immersion pipe, 150 °C				
from quantity	1	20	50	100

Art. No. Art. no. 91045 -TH45 with 45 mm brass immersion pipe, 150 °C				
from quantity	1	20	50	100

Art. No. Art. no. 90060 -TH60 w/ nickel-plated 60 mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 90100 -TH100 w/ nickel-plated 100 mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 90150 -TH150 w/ nickel-plated 150 mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 90200 -TH200 w/ nickel-plated 200 mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 90300 -TH300 w/ nickel-plated 300 mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100

Art. No. Art. no. 90400 -TH400 w/ nickel-plated 400 mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100

Art. No. 92100 -TH100 Estainl. steel imm. sleeve 100 mm, test prod up to 300 °C				
from quantity	1	20	50	100

Art. No. 92150 -TH150 Estainl. steel imm. sleeve 150 mm, test prod up to 300 °C				
from quantity	1	20	50	100

Art. No. 92200 -TH200 Estainl. steel imm. sleeve 200 mm, test prod up to 300 °C				
from quantity	1	20	50	100

Sensors

VFS sensor for combined flow and temperature measurement



no moving parts in the fluid, minimal permanent pressure loss, no increasing measurement deviation due to wear-out, „2 in 1 Sensor“ - flow and temperature in one sensor

VFS1-12L/ Min 0-100 °C, 3/ 4"AG, stainless steel	VFS2-40L/ Min 0-100 °C, 3/ 4"AG, stainless steel
Art. No. 78012	Art. No. 78040
VFS5-100L/ Min 0-100 °C, 1", stainless steel	VFS10-200L/ Min 0-100 °C, 1 1/ 4" stainless steel
Art. No. 78100	Art. No. 78200
VFS20-400L/ Min 0-100 °C, 1 1/ 2" plastic	
Art. No. 78400	

VVX15 combined sensor for flow and temperature measurement



for details see VFS combined sensor especially robust, sensor element separated from medium

VVX15 2-40L/ Min 0-100 °C, 3/ 4"AG, plastic
Art. No. 78041

RPS - sensor for combined pressure and temperature measurement



no moving parts in the fluid, precise pressure sensor, temperature compensated and linearized, „2 in 1 sensor“ - pressure and temperature in one sensor

RPS-sensor 0-10 bar 2,9m cable
Art. No. 78600

Relays

External relay 1W 10A in protective casing, to be used where e.g. outputs of the controller shall be operated potential-free, the control power of the controller is not sufficient.



coil voltage	9-230V AC/DC	max. switching voltage	250VAC
switching contacts	1 change over contact	max. switching current	10A at AC1
case protection category	IP55		

Relay IFR/ 1W
Art. No. 77500

External switching relay 4 NO 24A in the protective housing is to be used wherever the switching capacity of the controller is not sufficient when multi-pole switching is required, as for example with three-phase electric heating rods.



coil voltage	230VAC	max. switching voltage	400VAC
switching contacts	4 closing contact	max. switching current	24A for AC1
case protection category	IP30		

Relays 4Sx24A
Art. No. 77501

External relay 1W 6A in protective casing, to be used where the 0-10V outputs of the controller shall be operated potential-free



coil voltage	9-12VDC	max. switching voltage	250VAC
switching contacts	1 change over contact	max. switching current	6A bei AC1
case protection category	IP55		

Relay 1W 6A
Art. No. 77502

Other accessories

Overvoltage protection for collector sensor in 90 x 35 x 38 mm conduit box



Art. No. 77600 -KA12 Overvoltage protection for collector sensor in branch box

from quantity	1	20	50	100
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100 pieces fuse 2A isolated, slow blow, boxed



Art. No. 02125 - 100xfuse 2A slow blow

€/per piece

IP44 Seal Set



Art. No. 06442 -IP44 Seal Set

€/per piece

Switching power supply 24VDC 12W



- 100 - 240VAC
- 24VDC 0,63A
- E.g. suitable as a power supply for up to 6 °CALEON room controllers or for other external devices.
- including wall-mounted housing

Art. No. 77505 -Switching power supply 24 VDC 12 W

€/per piece

Substitutes for controllers of previous series



This table indicates which new controller succeeds those of previous series. These recommendations are non-binding and do not replace your own examination if the controller meets your requirements.

Previous model	Recommended Controller
TDC 1	MTDC
TDC 2	MTDC
TDC 3	MTDC
TDC 4 without VFS	MTDC/LTDC
TDC 4 with VFS	LTDC
TDC 5	LTDC
SD 01	STDC
SD 01/f	SBMC
DR 01	STDC
DR 01F	SBMC
DR 1	STDC
DR 1S	STDC
DR 1F	SBMC
DR 2	MTDC
DR 3	MTDC
DR 4	MTDC/LTDC
DR 5	LTDC
HR3	MHCC
HCC3	MHCC
HCC4/HCC5/HCC6	LHCC
MR...	XHCC
SR...	XHCC

From concept to implementation are we reliable partner of product managers in the heating industry. No matter if for white label versions of existing controls, with adapted hardware and software, or as a new development according to your wishes: being a specialist for digitisation, electronics and IT, we enhance your heating product for joint success.



What you can count on as our OEM customer:

Co-engineering



We like to go beyond working through fixed specifications by contributing as a technical **sparring partner**. In this way, we develop your ideas further together, propose alternative courses of action and optimisations, provide support in the selection of components and suppliers and sometimes even question the original specifications if it benefits the outcome. In the end, what counts is the technical functionality and market success of your product.

Continuity

Your OEM contacts are experienced technicians with an average of **12 years** of operating and industry experience. They know the application side of your products, as well as our own development processes in electronics and software. Our business relationships are also lasting: our average OEM customer has been loyal to us for over **9 years** and entrusts us with an average of **3** additional OEM projects after the initial project.



Pragmatism



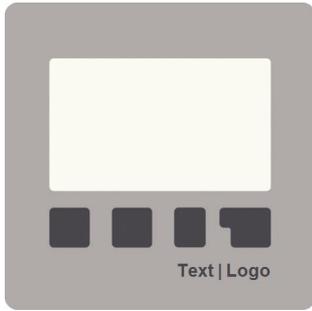
Whenever circumstances require it, we go the extra mile for our OEMs. For example, we sent a technician at short notice to a steel factory close to our headquarters for troubleshooting an urgent hydraulic problem on behalf of an Italian customer – the system was then up and running again. We spontaneously put our production hall and two technicians at the disposal of another customer to build a functional prototype in a rush to win a major project. We flew from Germany to Madrid and optimised an important reference plant for a good customer. And we travelled with a customer through Eastern Europe to provide support in design, component dimensioning and supplier selection for the development of a hydraulic station. We cannot solve everything, but **we will never let you down without a fight**.

You will find your OEM options on the following pages →

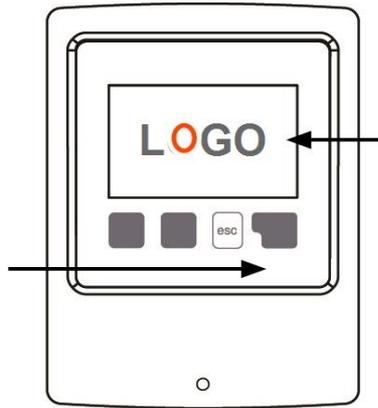
Customization

Special net prices, not subject to discounts

Customization S Controllers



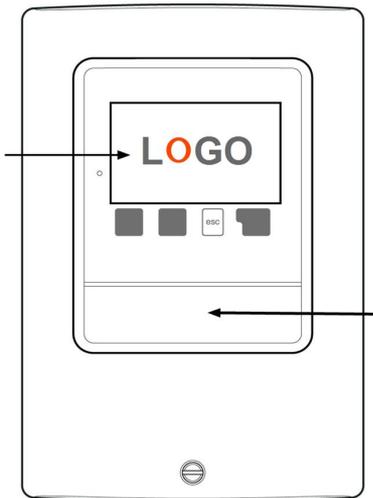
STDC front label, plastic, up to 4 colours	
€/per piece	
Minimum order quantity	1.000 front labels



Company logo in display at startup	
One off cost	

Customization M, L and X Controllers

Company logo in display at startup	
One off cost	



TDC/ HCC. front label, paper paperstrip in a transparent plastic window	
€/per piece	
One off cost	

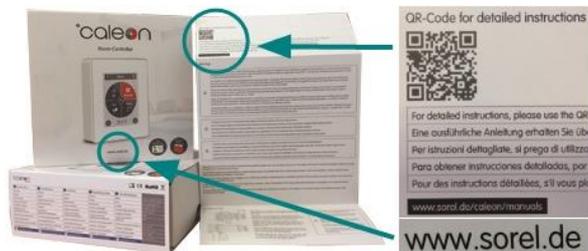


TDC/ HCC front label, plastic, up to 4 colours	
€/per piece	
Minimum order quantity	500 front labels

Customization °CALEON



Company logo in display at startup and before standby	
One off cost	



Cardboard sleeve and manual for °CALEON	
€/per piece	
Minimum order quantity	500



Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

SOREL GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

Customized app



Customization °CALEON app
Customize colour, font, icons and app store launch.

One off cost

Customized app with custom functionality

One off cost

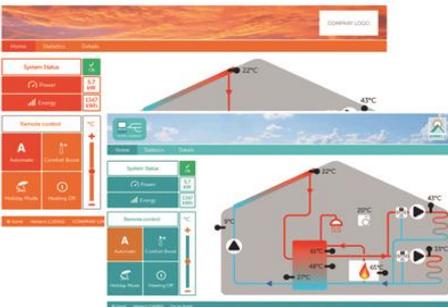
Customization °CALEON App Pro
Allows remote access for any number of users to any number of installations instead of individual licences (p. 1), and to set up your own pricing models for your customers. Requires personalised °CALEON app.

One off cost

Hosting fees/year



Customized SOREL Connect Page



Art. No. Art. no. 77770 SOREL Connect Page -Adaption of header (graphics, logo), sidebar (colour, text) and footer (text, link and colour)

One off cost

Customized packaging



Customized bar code and type decals (Dimensions 70 x 22 mm)

One off cost



Additional manual (e.g. other languages)

€/per piece



Parcel stickers/ packaging bags
(Dimensions: 70 mm x25.4 mm, b/ w)

€/per piece

One off cost



Sensors in labeled plastic bags

€/per piece

One off cost

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

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Customized manual
(Logo, name, address, contact information)

One off cost

Adaptions



For special requirements, we happily extend our controls by the desired hardware or software features. On request, we supply your controls with customer-specific pre-parametrisation as a plug & play solution to simplify the installation – for individual systems as well as in series.

Please contact us: oem@sorel.de

Development Service

You want to implement your own product idea and are looking for a professional partner who turns fiction into reality with you? With more than 25 years of practical experience in electronics and software development for the heating industry, we take your products to the digital age!



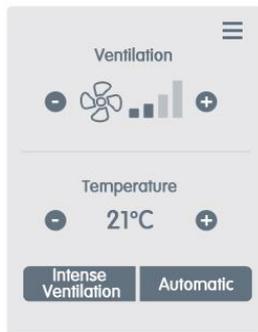
Please contact us: oem@sorel.de

OEM Touchpanel



Based on our classy control panel with capacitive TFT touch display and elegant glass cover, we are pleased to develop an individual product for your application together. Using the existing hardware, operating system and various software modules is the smartest way towards your specific solution with reasonable development effort.

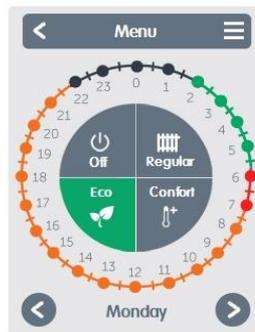
Application Examples



Ventilation Control (2.8")



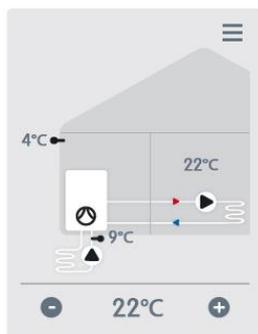
Wood-Burning Stove Control (2.8")



Universal Timer (2.8")



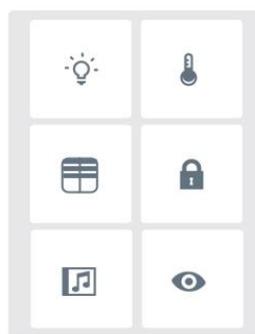
Smart Thermostat (2.8")



Heat Pump Control (3.5")



Energy Manager (3.5")



Smart Home Central Unit (3.5")



System Controller for Boiler Panels (4.3")

Hardware Options



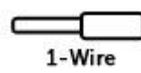
WLAN



2x 0-10V/PWM



CAN bus



1-Wire



Potential-free

Please contact us: oem@sorel.de

Pre-wiring

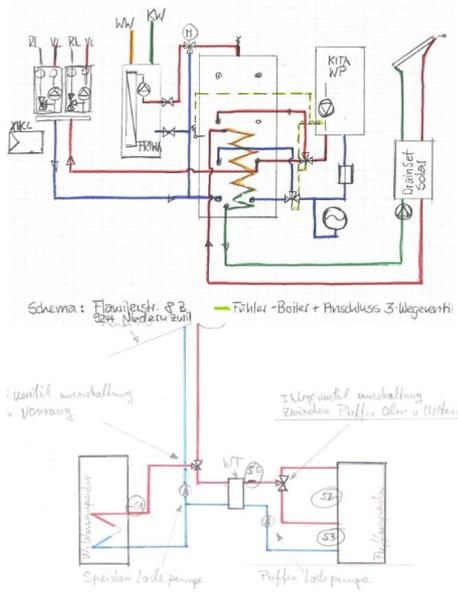


Pre-wiring ex works strongly simplifies the installation on site. It saves time during assembly, prevents mistakes and provides a cost advantage due to the industrial wiring in large quantities. We happily arrange the right solution for your application from our broad selection of ready-for-use cable types and lengths.

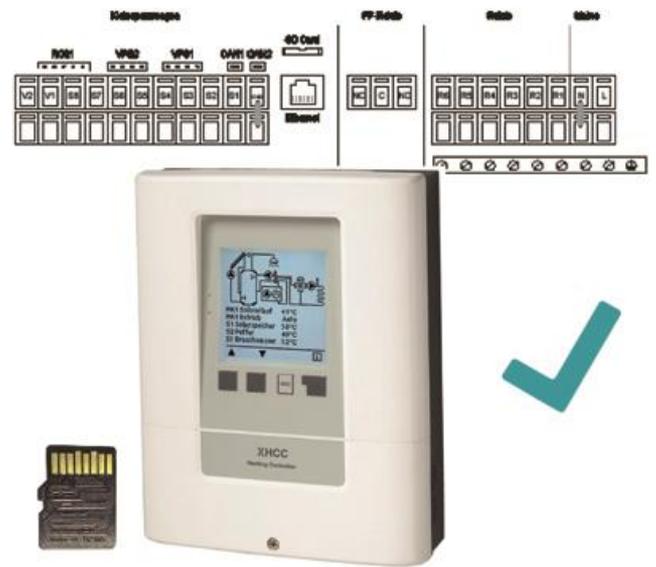
Please contact us: oem@sorel.de

System-Dependent Pre-Parametrisation

1. Send hydraulic plan with short description



2. Receive preset controller with clamp connection plan



Manual presetting of the controller adapted to the system of the customer. The price includes a simple sheet with allocation of the appliances like pumps and valves and the Temperature sensors.

Art. No. 06899

PC Simulation



Handy tool for marketing, training and self-study. Available for every SOREL controller. Request now at simu@sorel.de.

SOREL GmbH Mikroelektronik

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HRB 10189
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12.03.2021

* 0,14 EURO/Min. aus dem Festnetz der T-Com. Mobilfunk max. 0,42 EURO/Min. (nur für Deutschland)