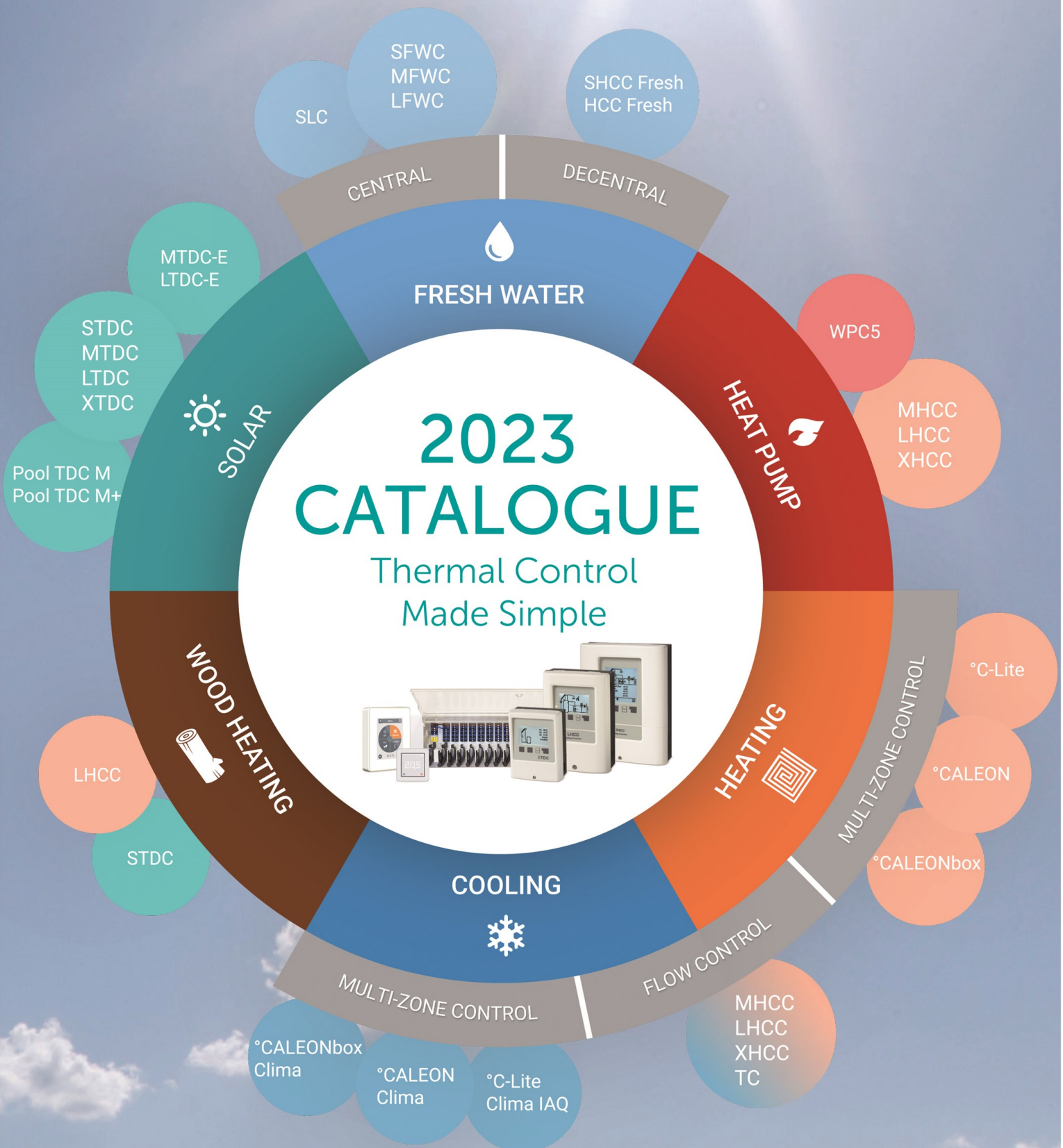


2023 CATALOGUE

Thermal Control
Made Simple



Dear SOREL customer,

in the previous year, we were able to reliably meet our customers' needs by maintaining an average delivery time of 3.8 weeks, even under the special challenges of material procurement and logistics. In 2023, too, ensuring your ability to supply your own customers remains a top priority. But also our product development team has once again produced numerous innovations and improvements with which you can continue to conquer the HVAC market.



A special highlight are the new °C-Lite Smart Thermostats: via the built-in WiFi chip, the sensor data of the 4-in-1 multisensor as well as adjustable setpoints are shared wirelessly with the °CALEONbox control system for surface heating.

As with all Room sensors and °C-Lite variants, the compact design offers the best possible possibilities for integration into common switch ranges. By using the existing power supply, there is no need for regular battery replacement.

Read more about the new °C-Lite Smart on page 14.



Our tech stack, which provides a wide range of customisation options for the development of customer-specific devices, is also constantly growing. The hardware platform of the new °C-Lite thermostat, for example, provides for many additional assembly options to realise different switching requirements, sensor inputs or connectivity options.

Our OEM blog offers many suggestions for this. Contact our OEM sales team to learn more about our tech stack and how it can be applied to your product portfolio.

We look forward to an exciting year with you.



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



Jonas Bicher and Georg Bicher, CEOs

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HEATING & COOLING

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Sensor inputs Pt1000



Sensor inputs



Potential free relay



Ethernet connection



WLAN



Direct sensors



Zones



Modbus



°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



0-10V or PWM signal



Connectivity Data logger



Connectivity to °CALEONbox

°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.



°CALEONbox explained in 2 minutes
→ <https://youtu.be/puzsUHLFCFU>



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



For each zone, either °CALEON Room Controller, °C-Lite Thermostat or Room 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 system maintenance with software updates via WiFi and elegant smartphone app.



Built-in setup wizard to facilitate fast and correct commissioning



Preventive dew point calculation based on relative humidity in the rooms



Selectable additional functions for free outputs: Weather-compensated mixing circuit, reheating, heating/cooling switchover, 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

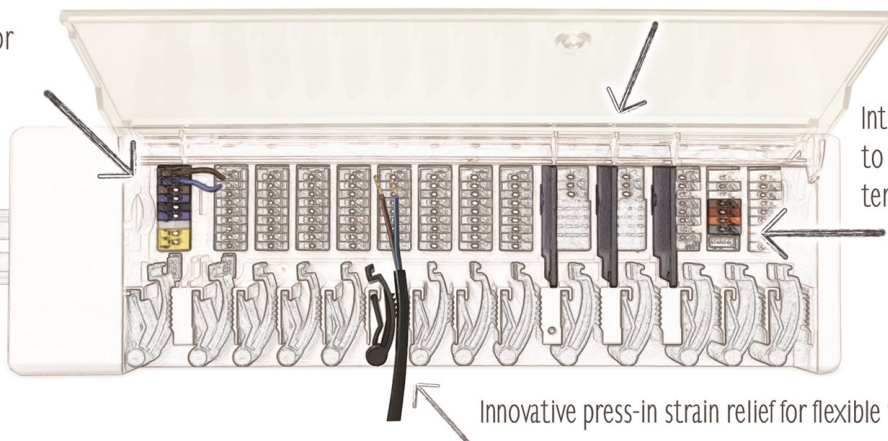
Press-on clamp terminals instead of screw clamps for easy wiring

Easy installation also on DIN rail

Removable dividers and front cover for more space during clamp connection

Intuitive wiring thanks to colour-coded clamp terminals

Innovative press-in strain relief for flexible wires



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



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

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

*2 up to 8 °CALEON can be supplied with 24VDC by °CALEONbox.

*3 up to 8 °C-Lites can be supplied by the °CALEONbox with 5V DC operating voltage from the 1-Wire bus

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

*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 via °CALEON Clima Room Controller/ °C-Lite Clima/ Room Sensor Clima in each zone where it is installed separately

°CALEONbox

°CALEONbox



Zoning controller for surface heating systems in combination with at least 1 °CALEON room controller.

Inputs / Outputs				Connectivity	
20x  1-Wire	2x  0-10V PWM	32x  8-Zones	9x  230 VAC	 *CALEON	
	1x  Potential-free	3x  0-10V PWM			 HCC
		24VDC 20W			









Art. No. 74001 - °CALEONbox

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

°CALEONbox Clima



Zoning controller for surface heating and cooling systems in combination with at least 1 °CALEON room controller. 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  8-Zones	9x  230 VAC	 *CALEON	
	2x  Potenzialfrei	3x  0-10V PWM			
		24VDC 20W			

Art. No. 74002 - °CALEONbox Clima

from quantity	1	5	10	20
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Application Examples

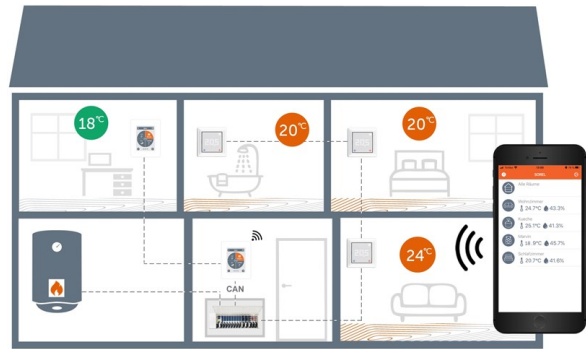
The components of the °CALEONbox systems can be flexibly combined. Some possibilities:

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



- 1x °CALEONbox
- 1x °CALEON
- 1x Room Sensor per 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
- 1x °C-Lite per additional room

Heating and cooling in the single family house with indication of the air quality (Indoor Air Quality and CO₂):

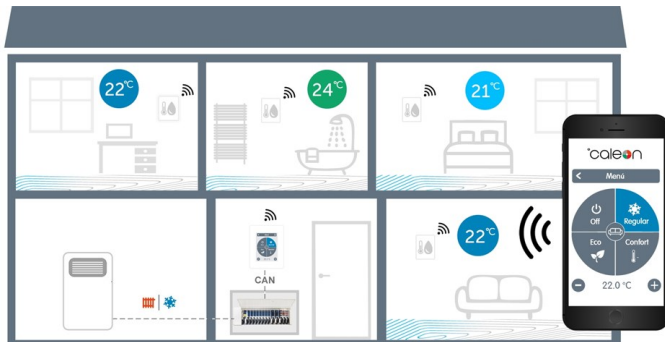


- 1x °CALEONbox Clima
- 1x °CALEON Clima
- 1x °C-Lite Clima IAQ per additional room



- 1x °CALEONbox per 8 rooms
- 1x Room Sensor Smart per additional room (WiFi)
- 1x °CALEON Clima Smart Room Controller (WiFi)

Single family house with WiFi room sensors, energy demand, and seasonal change heating/ cooling:



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

Single family house with °C-Lite Smart thermostats, energy demand, and seasonal change heating/ cooling:



- 1x °CALEONbox Clima
- 1x °CALEON Clima Smart (WiFi)
- 1x °C-Lite Smart thermostat per additional room (WiFi)

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

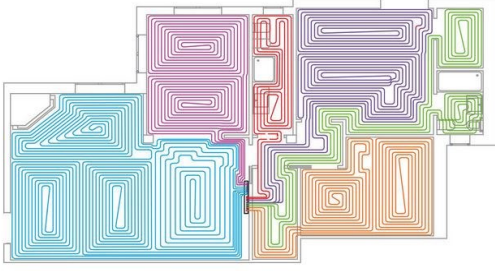
SOREL GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

°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

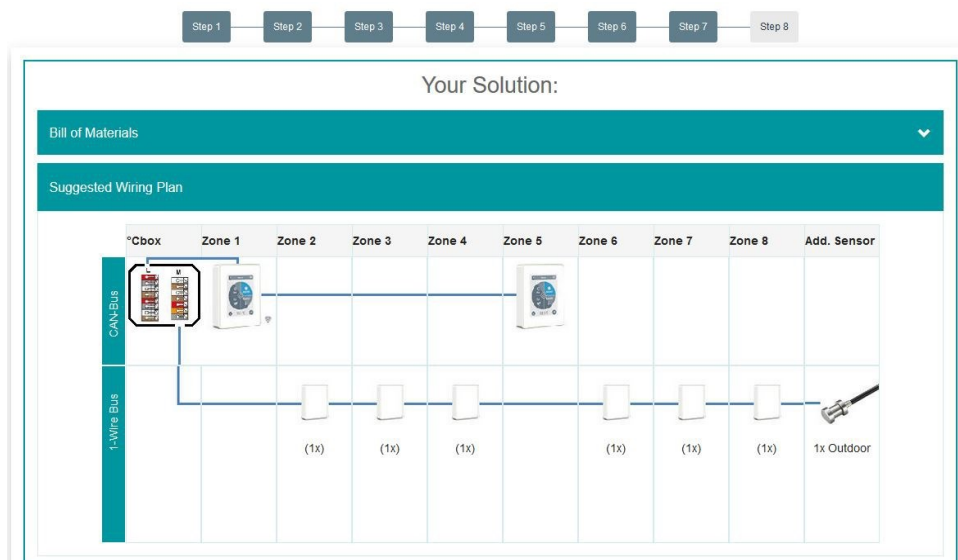
How many zones does your surface heating have?



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](#)



Start Configurator:

<https://caleonbox.sorel.de>



Recommended accessories for °CALEONbox

°CALEON Smart
Room Controller



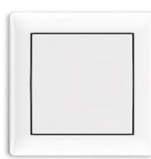
→ Page 12

°C-Lite
Thermostat



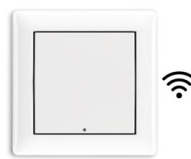
→ Page 14

Room Sensor



→ Page 16

Room Sensor
Smart



→ Page 16

HCC
Controller



→ Page 22

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

°CALEONbox explained in 2 minutes



→ <https://youtu.be/puzsUHLFCFU>

Simplified wiring of controllers for under-floor heating with °CALEONbox



→ <https://youtu.be/YI6yCJgl4bs>

How to wire several °CALEONboxes via the building CAN bus



→ <https://youtu.be/h3bMg6PU2YY>

How to set dew point protection for surface cooling with °CALEONbox Clima



→ <https://youtu.be/lmz6PbvX20>

How to connect 1-wire Room Sensors to the °CALEONbox



→ <https://youtu.be/0xykjsqhS94>

How to install a basic UFH system with °CALEONbox example with 8 rooms



→ <https://youtu.be/lqbTxal-2Vs>

Controlling large underfloor heating systems



→ <https://sorel.de/en/commercial-ufh-systems-blog/>

Requirements of Surface Cooling for the Control Technology



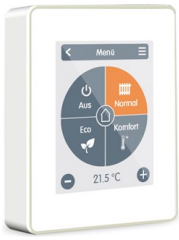
→ <https://sorel.de/en/surface-cooling-control-blog/>

Multi-zone control of surface heating with only 1 thermostat

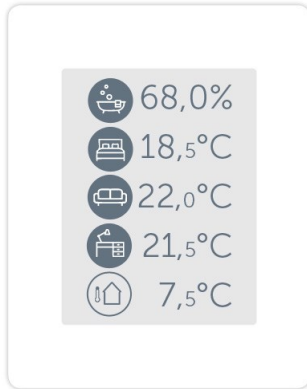


→ <https://sorel.de/en/multi-zone-control-of-surface-heating-systems>

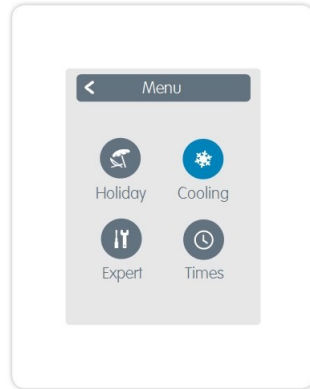
°CALEON Room Controllers



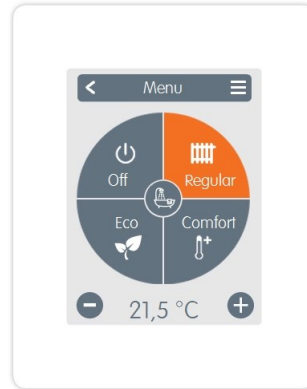
Comfortable touch controller for comfortable remote control of heating and cooling system from the living room with integrated temperature and humidity sensor. Control the heating zones in conjunction with a °CALEONbox and influence the flow temperature with °CALEONbox and HCC controllers. This enables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



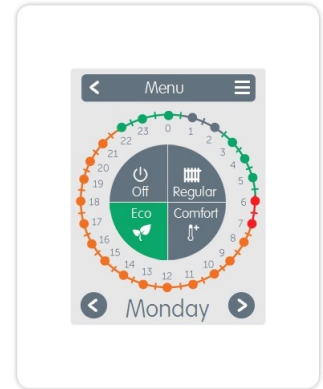
Room selection with several heating zones



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 heat request:



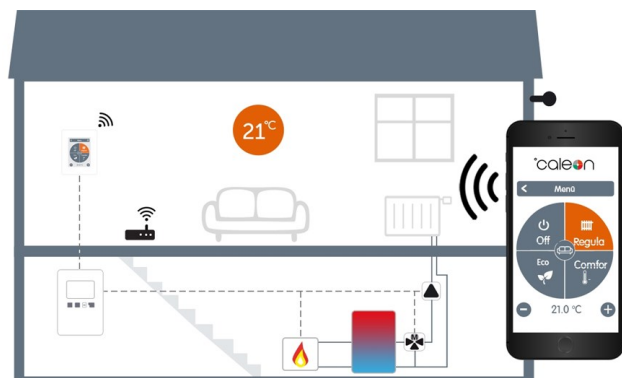
- 1x °CALEONbox
- 1x °CALEON Smart (WiFi)
- Room Sensor Smart per additional room (WiFi)

Zone control with energy request, season change heating/ cooling and WiFi sensors:

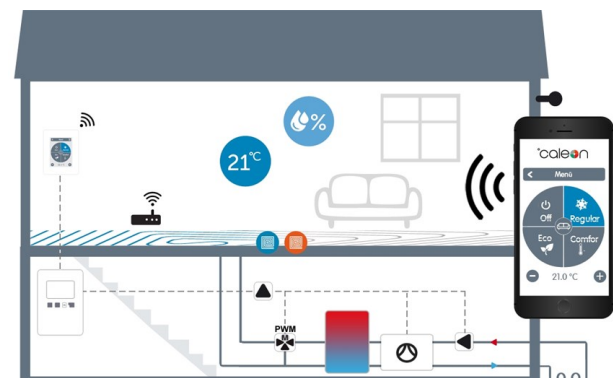


- 1x °CALEONbox Clima
- 1x °CALEON Clima Smart (WiFi)
- 1x Room Sensor Clima Smart per additional room (WiFi)

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



- 1x MHCC
- 1x °CALEON Smart (WiFi)



- 1x LHCC
- 1x °CALEON Clima Smart (WiFi)

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

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



	°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	✓	✓
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 Room Controller

Room Controllers for remote control and optimisation of the heating system in combination with SOREL heating controllers or °CALEONbox. By influencing the calculation of the flow temperature, they permit an even faster and more precise temperature control.

°CALEON Room Controller [Discontinued product]



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

Inputs	Connectivity	Menu Languages
1x	 	

Art. No. 70001 - °CALEON Room Controller

from quantity	1	10	20	40
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°CALEON 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 MHCC, LHCC, XHCC and °CALEONbox.

Inputs	Connectivity	Menu Languages
1x	 	

Art. No. 70003 - °CALEON Smart Room Controller

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

Recommended Accessories

CAN
Connection cable



→ Page 60

HCCs



→ Page 22

°CALEONbox



→ Page 6

°CALEON App



→ Page 19







°CALEON Clima Room Controller

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 Controller [Discontinued product]



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
<div>1x </div> <div>2x  0-10V PWM</div>	<div></div> <div></div> <div></div>	

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	 WLAN	 °CALEON	      	
		 HCC	 °caleon box	     	
		 °CALEON App			

Art. No. 70004 - °CALEON Clima Smart Room Controller				
from quantity	1	10	20	40

Recommended Accessories

CAN
Connection cable



→ Page 60

HCCs



→ Page 22

°CALEONbox



→ Page 6

°CALEON App



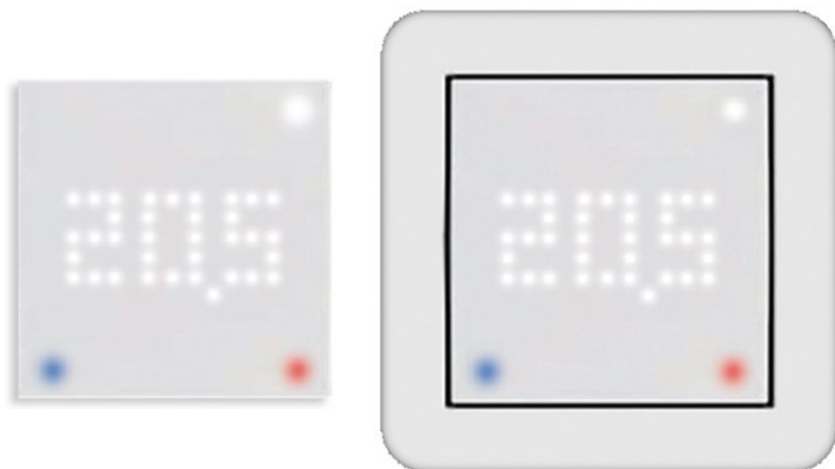
→ Page 19

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°C-Lite Thermostat

Digital room thermostats for surface heating and cooling systems with integrated multisensor and digital communication via 1-Wire bus. Intuitive operation via integrated touch areas and LEDs that blend discreetly into the plastic panel when in standby mode. Continuous monitoring of air quality possible via colored status LED. Versatile installation options for flush mounting in common switch frames or as a surface-mounted variant.



°C-Lite Demo Video

→ <https://youtu.be/59WqSP4Gsig>



4 in 1 multisensor

Measurement of temperature, relative humidity, Indoor Air Quality (IAQ) and CO₂. Display of indoor air quality by means of colored LED.



Touch room thermostat

Thermostat with 3 colored LEDs and intuitive operation via 3 capacitive touch zones.



Connectivity

Digital communication with °CALEONbox via 1-Wire bus. Further interfaces can be realized as OEM version.



Versatile mounting

Integration in common 55mm switch programs possible as flush-mounted variant, as surface-mounted variant or in country-specific cover frames.

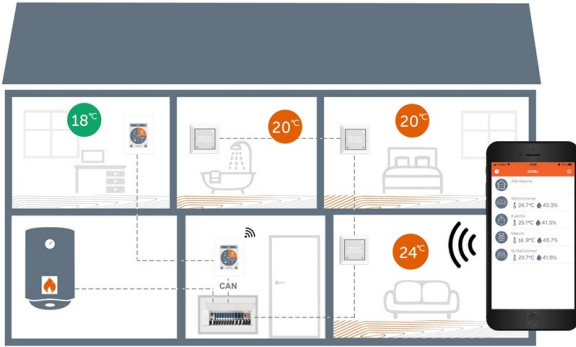


	°C-Lite	°C-Lite Clima IAQ	°C-Lite Smart	°C-Lite Clima Smart
Sensor	Temperature sensor (°C)	4 in 1 (°C, RH, IAQ, CO ₂ eq)	Temperature sensor (°C)	4 in 1 (°C, RH, IAQ, CO ₂ eq)
Heating operation	✓	✓	✓	✓
Cooling operation	✗	✓	✗	✓
Power supply	5V DC	5V DC	230VAC	230VAC
Power consumption	0.1 W standby 0.5 W active	0.1 W standby 0.5 W active	1 - 2,5 W	1 - 2,5 W
Protection Class	IP20	IP20	IP20	IP20
Interface	SOREL 1-Wire	SOREL 1-Wire	WiFi 2,4GHz	WiFi 2,4GHz
Display	LED (RGB)	LED (RGB)	LED (RGB)	LED (RGB)
Operation	via 3 touch zones	via 3 touch zones	via 3 touch zones	via 3 touch zones
Dimension	55 mm x 55 mm	55 mm x 55 mm	55 mm x 55 mm	55 mm x 55 mm
Housing	Plastic matt white	Plastic matt white	Plastic matt white	Plastic matt white
Mounting	Surface / Flush-mounted	Surface / Flush-mounted	Surface / Flush-mounted	Surface / Flush-mounted

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

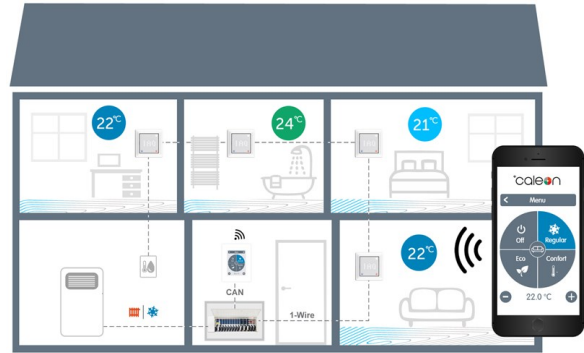
Application Examples

Zone control in a single-family house with heat request



1x °CALEONbox, 1x °CALEON Smart Room Controller, 1x °CALEON Room Controller, 3x °C-Lite

Single-family house with °C-Lite Clima IAQ and seasonal heating/ cooling:



1x °CALEONbox Clima, 1x °CALEON Room Controller Smart, 1x Room Sensor, 4x °C-Lite Clima IAQ

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



1x °CALEONbox, 1x °CALEON Smart (WiFi), 1x °CALEON Room Controller, 1x °C-Lite Smart per additional room

Heating and cooling in the single family house with indication of the air quality (Indoor Air Quality and CO2):



1x °CALEONbox Clima, 1x °CALEON Clima Smart, 1x °C-Lite Clima Smart IAQ per additional room

List Prices

Art. No. 75001 - °C-Lite					Art. Nr. 75002 - °C-Lite Clima IAQ				
from quantity	1	10	20	40	from quantity	1	10	20	40
Art. No. 75101 - °C-Lite Smart					Art. No. 75102 - °C-Lite Clima IAQ Smart				
from quantity	1	10	20	40	from quantity	1	10	20	40

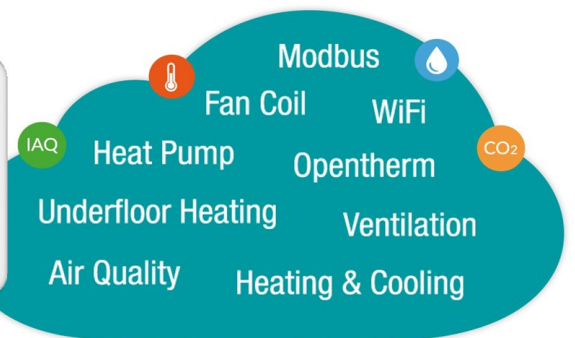
For OEM customers, °C-Lite represents a versatile product platform with numerous customization options.

Our OEM blog offers many suggestions for this.



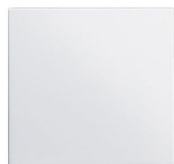
<https://sorel.de/en/hvac-blog/>

Ask for info about the °C-Lite OEM platform at oem@sorel.de !



Room Sensors for °CALEONbox

Each zone of the °CALEONbox requires either 1 °CALEON or optionally a °CALEON, °C-Lite or Room Sensor for zone 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. **Cover frames must be ordered separately as of 2023.**



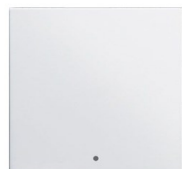
Room Sensor

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

Power supply	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), use twisted pair cable
Dimensions/ Housing	55 mm x 55 mm/ plastic matt white RAL9003. Further colour variants on request
Installation methods	Flush-mounted for switch box installation or surface-mounted with mounting set

Art. No. 80003 -Room Sensor

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



Room Sensor Clima

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

Power supply	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), use twisted pair cable
Dimensions/ Housing	55 mm x 55 mm mm/ plastic matt white RAL9003. Further colour variants on request
Installation methods	Flush-mounted for switch box installation or surface-mounted with mounting set

Art. No. 80004 -Room Sensor Clima

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 matt white RAL9003. Further colour variants on request
Installation methods	Flush-mounted for switch box installation or surface-mounted with mounting set

Art. No. 80103 -Room Sensor Smart

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



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	55 mm x 55 mm/ plastic matt white RAL9003. Further colour variants on request
Installation methods	Flush-mounted for switch box installation or surface-mounted with mounting set

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

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

Cover frame for °C-Lite and Room sensors

Cover Frame



Cover frame for 55mm inserts of °C-Lite or Room Sensor. Plastic frame white RAL9003, 80mm x 80mm matt eroded surface with UV protection.

Art. No. 82001 - Cover frame for 55mm insert

€/per piece

Surface Mounting Set



Mounting set consisting of cover frame and surface frame. 20mm total height for 55mm use of °C-Lite or Room Sensor. Plastic frame white RAL9003, 80mm x 80mm matt eroded surface with UV protection.

Art. No. 82002 - Mounting set surface-mounted frame

€/per piece

Surface Mounting Set High



Mounting set consisting of cover frame and surface frame. 40mm total height for 55mm insert provides sufficient space for sensors with 230V power supply such as °C-Lite Smart or Room Sensor Smart. Plastic frame white RAL9003, 80mm x 80mm matt eroded surface with UV protection.

Art. No. 82003 - Mounting set surface-mounted frame high

€/per piece

Mounting variants

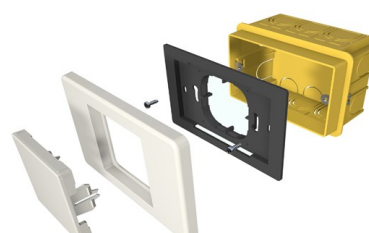
Flush mount variant



Surface mount variant



Italian variant



Additional sensors for °CALEONbox

Optional sensors for use on the 1-Wire bus of the °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

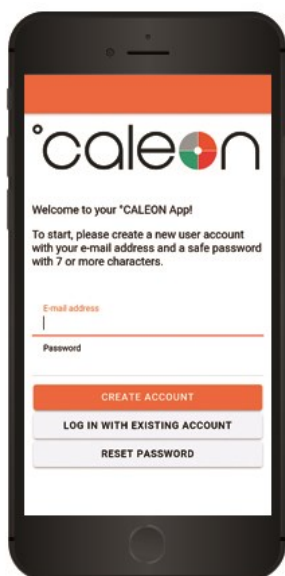
Art. No. 87006 -TA56 Outdoor Sensor 1-Wire				
from quantity	1	20	50	100



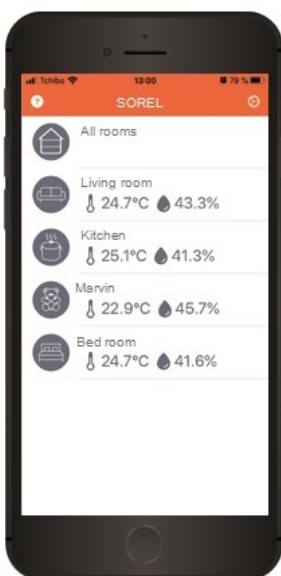
The °CALEON App allows your customer secure and convenient remote access to their °CALEON Smart Room Controller. For the professional user, it enables real added value through the extensive remote diagnosis and maintenance functions, such as:

- Service setup for guided remote commissioning
- Remote parameterisation for system optimisation and problem solving
- Controlled installation of firmware updates

Available here for free:



Simple setup via
setup wizard



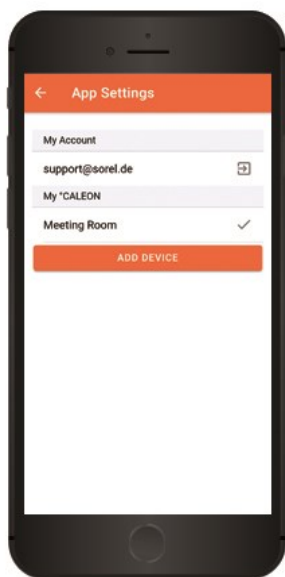
Temperatures and humidity in real
time



Select operating mode and set tar-
get room temperature



Configure time program



Access to multiple systems



Service values



Remote parameterisation of all set-
tings



Advanced diagnostic tools and
remote updates

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.

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.

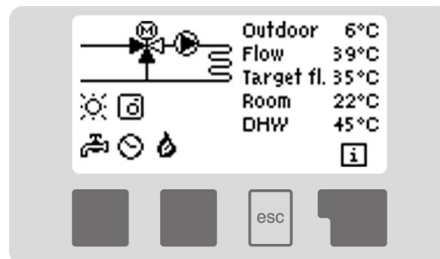
ErP-Bonus

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

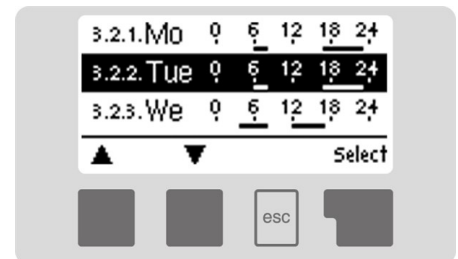
Operator Guidance



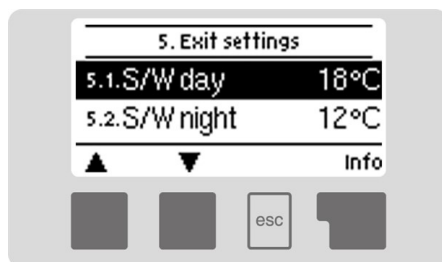
The setup wizard will rapidly guide you through the settings which need to be performed in a logically reasonable sequence. This way, any misadjustment is avoided and the parametrising is simplified.



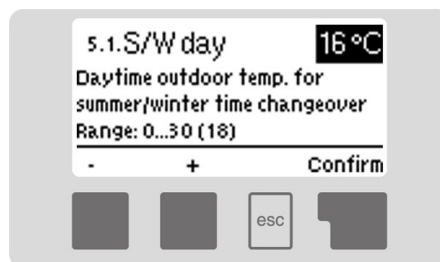
The display of the current measured values and the operating conditions is performed in a graphic mode with animations. Important functions are indicated as icons.



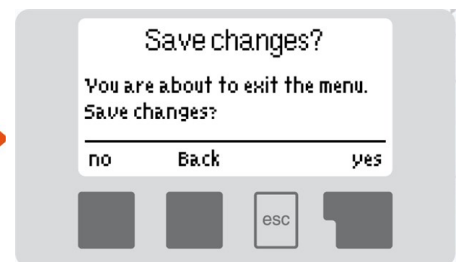
Three operating times can be set per weekday and can be transferred to other days as well.



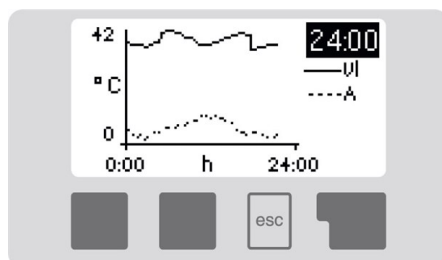
The clear menu offers options for request, analysis and setting.



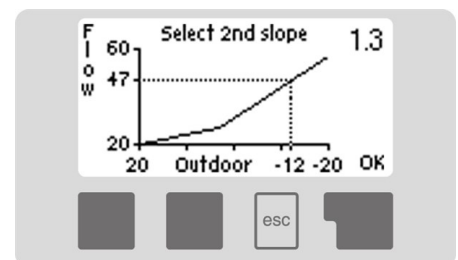
The self explanatory operator guidance allows the simple parametrisation, assisted with functional explanations.



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.

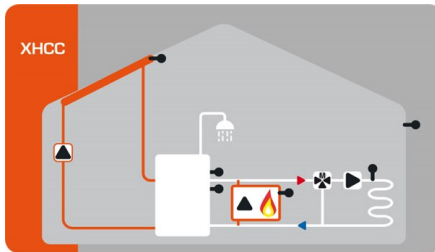
Additional functions for extending predefined schemes

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

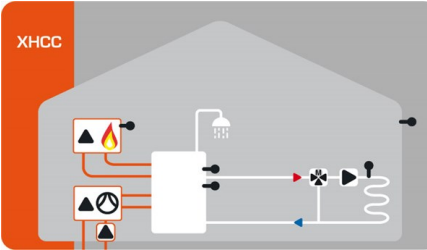
Example:

System 1 +  + 




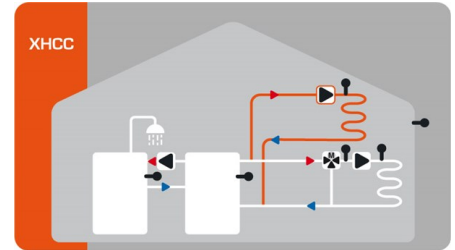
Combined storage tank with mixed heating circuit with additional function solar and additional heating with pump

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
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 24



LHCC	XHCC
10	17
6	11
1	2
1	2
1	2
°CALEON / °CALEON Klima	°CALEON / °CALEON Klima
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
✓	✓

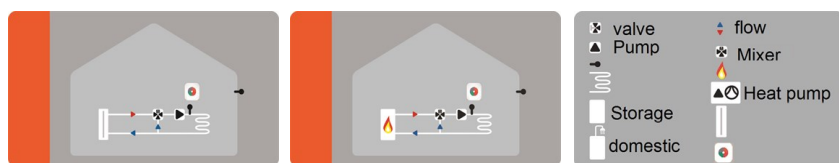
MHCC - Medium Heating Controllers

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

Inputs / Outputs	Connectivity	Menu Languages
<div>3x Pt1000</div> <div>2x 230 VAC</div> <div>1x RC20/RC21</div> <div>1x 230 VAC</div> <div>1x 0 - 10V</div> <div>24VDC 2W e.g. 1x °CALEON</div>	<div> °CALEON</div> <div> HCC</div> <div> Data logger</div> <div> °caleon box</div>	



Hydraulic variants MHCC



Recommended Accessories

°CALEON Smart Room Controller



→ Page 12

Data logger



→ Page 60

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

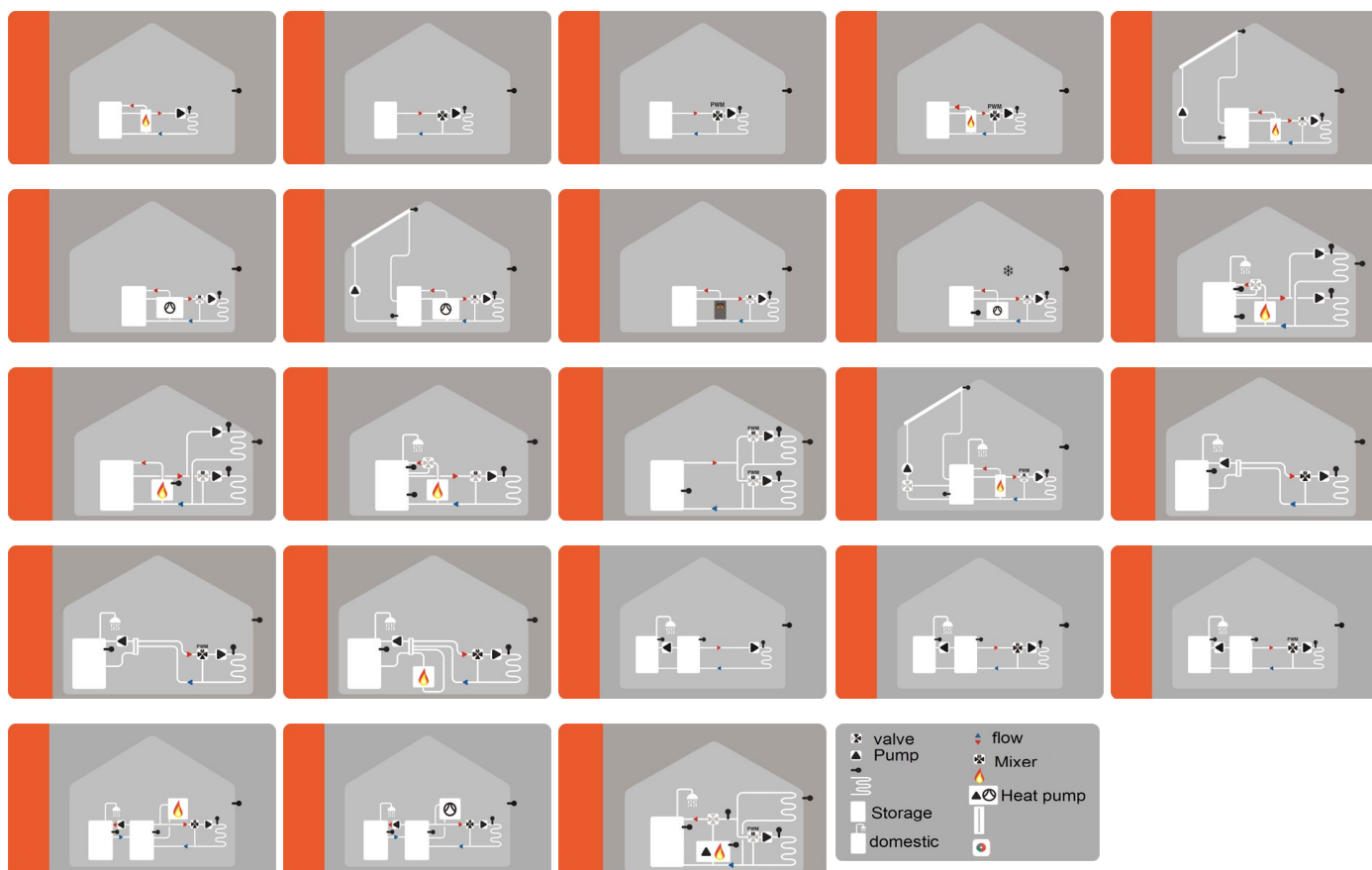
LHCC - Large Heating Controller

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
<div>6 Pt1000</div> <div>3x 230 VAC</div> <div>1x VVX/VFS/RPS</div> <div>2x 0-10V PWM</div> <div>1x Potential-free</div> <div>24VDC 6W</div>	<div>°CALEON</div> <div>HCC</div> <div>Data logger</div> <div>°caleon box</div>	<div> </div>



Hydraulic variants LHCC



Recommended Accessories

°CALEON Smart Room Controller



→ Page 12

°CALEON Clima Smart Room Controller



→ Page 13

Data logger



→ Page 60

CAN connection set



→ Page 60

Temperature sensors Pt1000



→ Page 61

Art. No. 27005 - LHCC

from quantity	1	5	10	20
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Art. No. 27315 - LHCC Set with 3 Pt1000 sensors TR/ S2, TA55, TT/ S4 and external relay 1W 6A

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

from quantity	1	5	10	20
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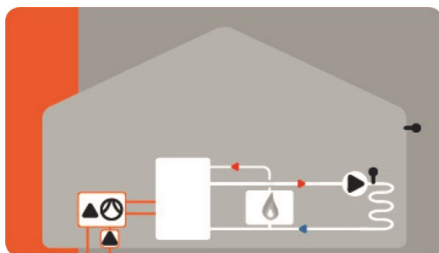


LHCC - Additional functions for free relays

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> • Thermostat • Return flow increase • Transfer • Difference • Solid fuel boilers • Free Cooling • Dehumidifier • Error message • Pressure monitoring | <ul style="list-style-type: none"> • Parallel operating with R1 • Parallel operating with R2 • Always on • Heat circuit 1/ 2 • Solar • Burner • Compressor • Boiler pump • Remote | <ul style="list-style-type: none"> • HP Compressor • DHW Valve • Cooling Valve • Circulation • Heating rod • RLA Mixer • Dissipation • Season Switch |
|--|--|--|

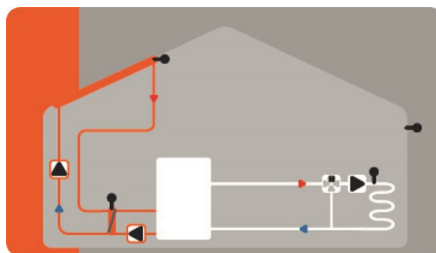
Example:

System 1 +



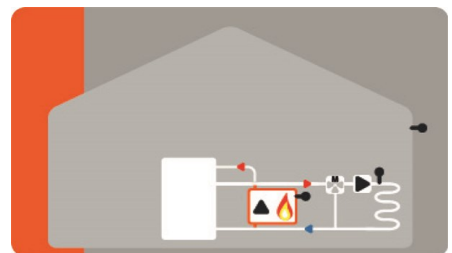
Combined storage with heating circuit with additional functions glycol pump and compressor.

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.

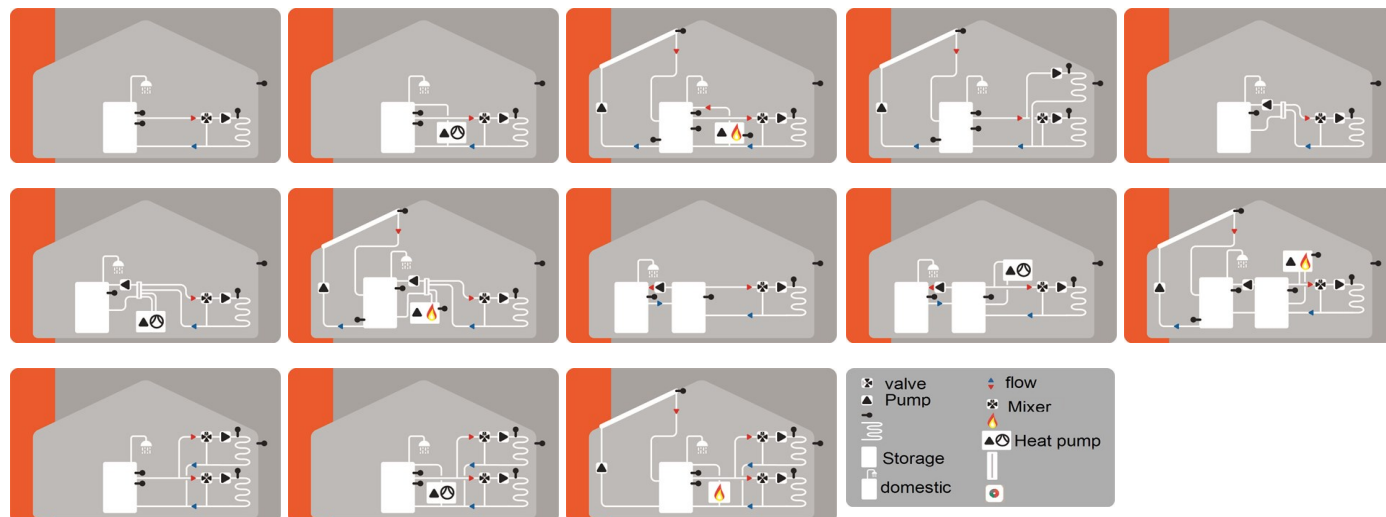
XHCC - XtraLarge Heating Circuit Controller

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
<div> <div>  <p>1x P1000</p> </div> <div>  <p>5x 230 VAC</p> </div> </div>	<div>  <p>*CALEON</p> </div> <div>  <p>HCC</p> </div>	
<div> <div>  <p>2x AC20 RC21</p> </div> <div>  <p>1x Potential-free</p> </div> </div>	<div>  <p>LAN</p> </div> <div>  <p>Data logger</p> </div>	
<div> <div>  <p>1x VUX / VFS / FPS</p> </div> <div>  <p>4x 0-10V PWM</p> </div> </div>	<div>  <p>*caleon box</p> </div>	
<div> <p>24VDC 6W</p> </div>		



Hydraulic variants XHCC



Recommended Accessories

°CALEON Smart Room Controller



→ Page 12

°CALEON Clima Smart Room Controller



→ Page 13

System-Dependent Pre-Parametrisation



→ Page 71

Temperature sensors



→ Page 61

Immersion sleeves



→ Page 62

List Prices



Art. No.28002 -XHOC with Ethernet				
from quantity	1	5	10	20

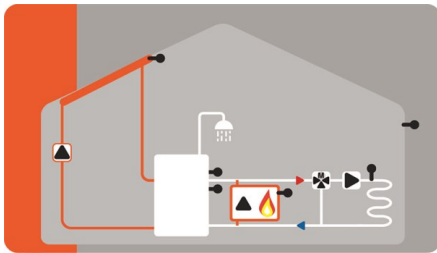
Prices ex works, excl. sales tax. Terms and conditions as can be seen on [sorel.de](https://www.sorel.de) shall apply. Discount on request.

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



XHCC - Additional functions for free relays

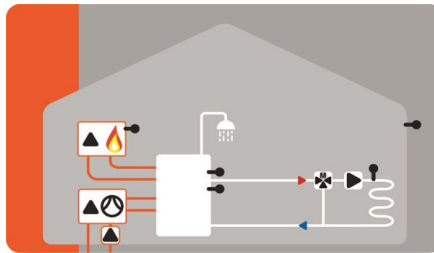
- Thermostat
- Mixer
- Return flow increase
- Transfer
- Difference
- Solid fuel boilers
- Error message
- Free Cooling
- Dehumidifier
- Pressure monitoring
- Parallel operating with R1
- Parallel operating with R2
- Always on
- Heat circuit 1/ 2
- Solar
- Burner
- Compressor
- Remote 1/ 2
- HP Compressor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

System 1 +  + 




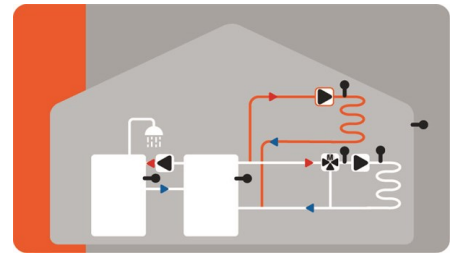
Combined storage tank with mixed heating circuit with additional function solar and additional heating with pump.

System 2 +  +  + 



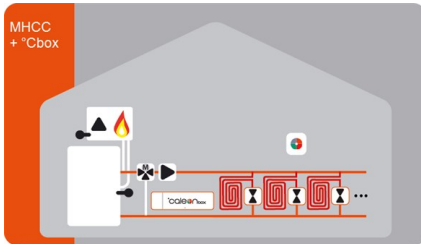
Combined storage tank with mixed heating circuit with additional function, additional heating and heat pump / compressor with brine pump.

System 8 + 

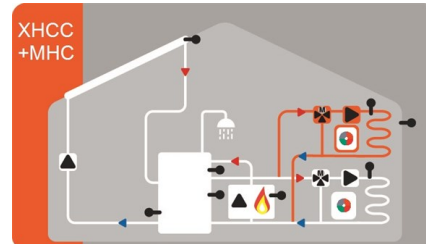


Combined storage tank with buffer storage tank with mixed heat circuit with additional function 2nd heating circuit.

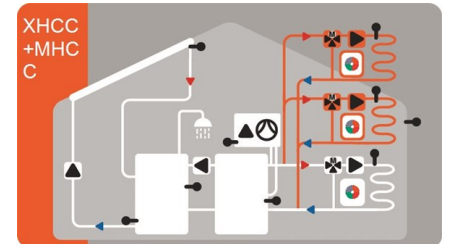
MHCC as an extension Module for 1 Mixed Heating Circuit each



MHCC standard scheme: gas boiler extended with °CALEONbox.

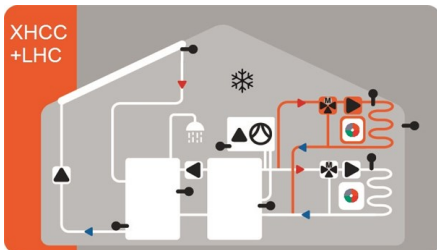


XHCC standard system: Combined storage with solar, gas boiler and heating circuit. An MHCC with °CALEON adds another heating circuit.

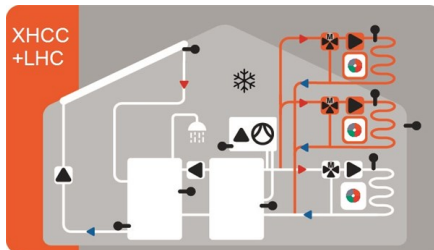


XHCC standard system: Buffer and hot water storage with solar, heat pump and heating circuit. Two MHCCs with °CALEON add two heating circuits.

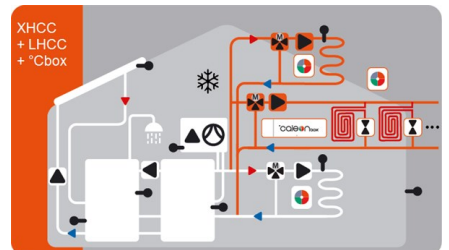
LHCC with °CALEON Clima as an extension for 1 Heating and Cooling Circuit



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.

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



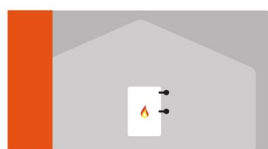
Hydraulic variants TC



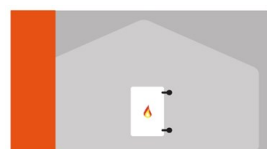
Temperature display



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					Art. No. 10106 - TC Set with 1 sensor TT/S2 PT1000				
from quantity	1	10	20	40	from quantity	1	10	20	40
Art. No. 10206 - TC Set with 2 sensors TT/S2 PT1000					Art. No. 10306 - TC Set with 3 sensors TT/S2 PT1000				
from quantity	1	10	20	40	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

FWC Fresh Water Controller

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

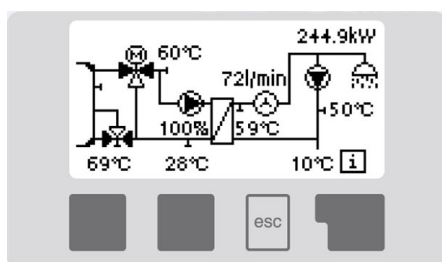
Additional fresh water stations via digital bus system when necessary due to a high amount of water being tapped. This makes a dedicated cascade controller / master controller obsolete.



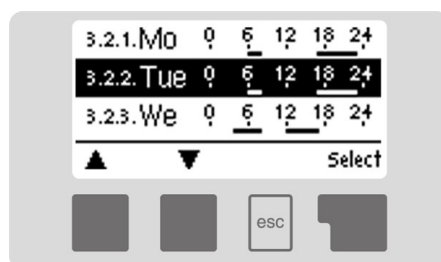
Operator Guidance



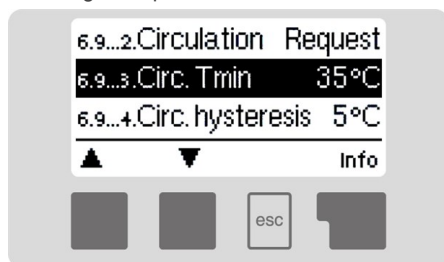
The setup wizard will rapidly guide you through the settings which need to be performed in a logically reasonable sequence. This way, any misadjustment is avoided and the parametrising is simplified.



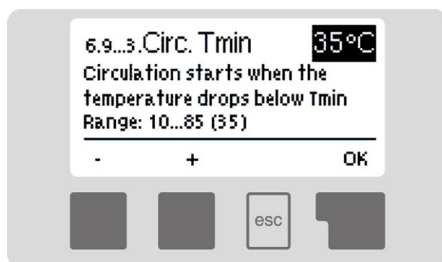
The display of the current measured values and the operating conditions is performed in a graphic mode with animations. Important functions are indicated as icons.



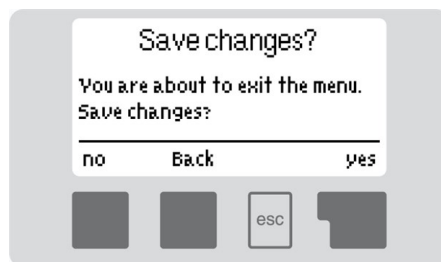
For each day of the week, operating times for circulation can be set and adopted for other days.



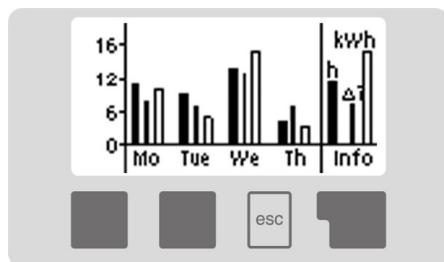
The clear menu offers options for request, analysis and setting.



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.

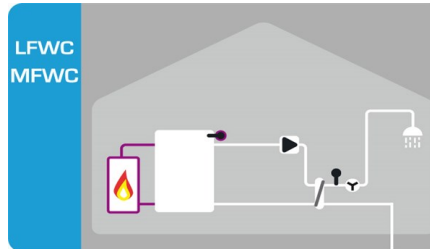
Additional functions for extending predefined schemes

Examples of additional functions

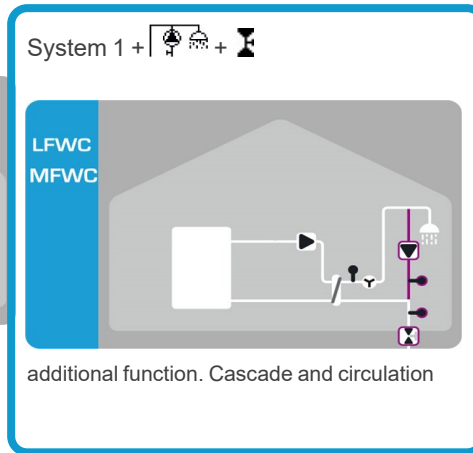
- Circulation
- Primary mixer
- Additional pump
- Parallel operating V1/V2
- Relay always on
- Storage heating
- Storage stratification
- AL heating
- Error message

Example:

System 1 + 

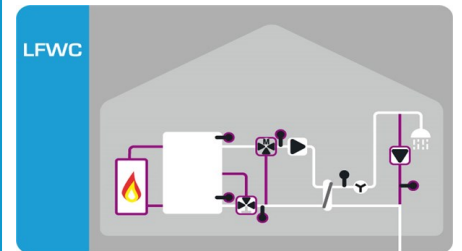


additional function. Storage heating



additional function. Cascade and circulation

System 1 +  +  +  +  + 



additional function Primary pre-mixer, circulation, storage stratification and storage heating



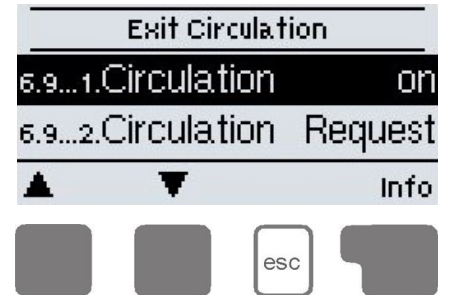
Additional function easily adjusted:



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.



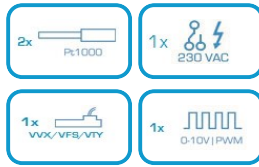
FWC	SFWC	MFWC	LFWC
Sensor inputs Pt1000	2	6	5 + 3*
Sensor inputs VFS / VVX / VTY sensor	1	1	1
Relay outputs 230V	1	3	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1	2	3 + 1*
Number of applications	2	9	12
Extension of pre-defined systems by selectable additional functions	✓	✓	✓
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.

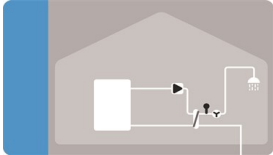
Inputs / Outputs



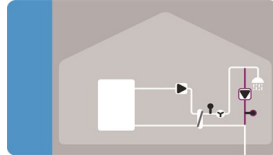
Menu Languages



Hydraulic variants SFWC



Basic scheme



Additional function circulation

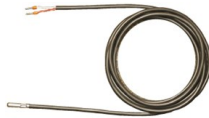
Recommended Accessories

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.

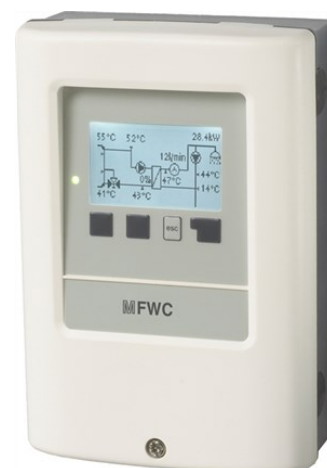
Art. No. 47001 - SFWC

on request

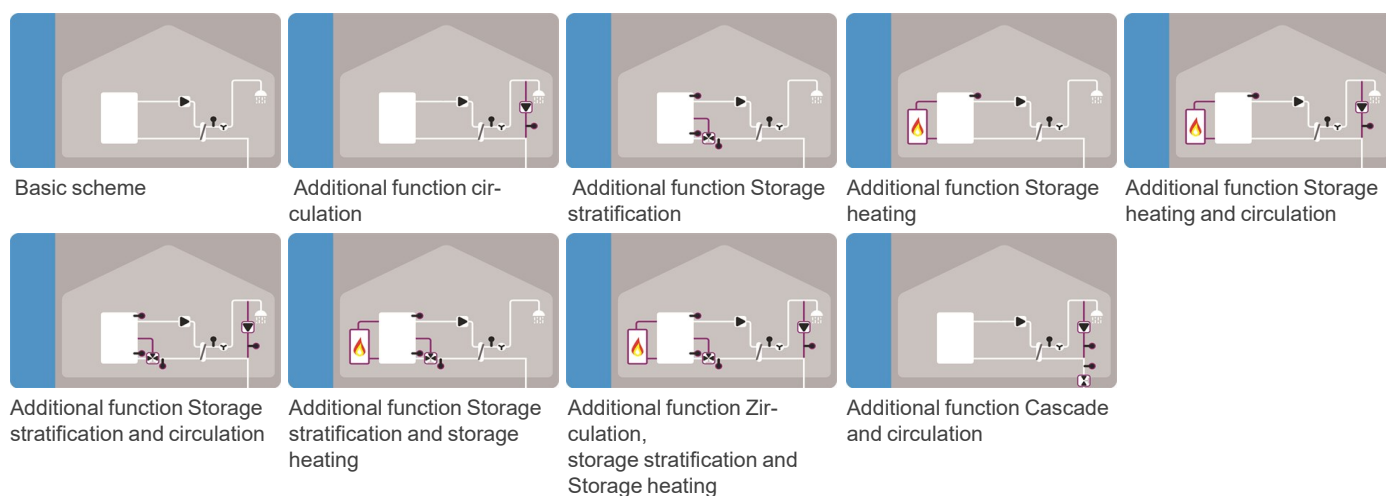
MFWC - Medium Fresh Water Controllers

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
<div>6x Pt1000</div> <div>3x 230 VAC</div> <div>1x VVX/VFS/VTY</div> <div>1x 230 VAC</div> <div>2x 0-10V/PWM</div>	<div>Data logger</div> <div></div>	<div> </div>



Hydraulic variants MFWC



Recommended Accessories

Data logger



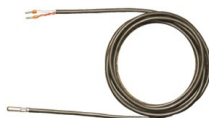
→ Page 60

VVX/ VFS/ RPS
Combined sensor



→ Page 63

Temperature sensors
Pt1000



→ Page 61

CAN
Connection set



→ Page 60

List Prices

Note: Sales only to manufacturers of fresh water systems.

Art. No. 47003 - MFWC

on request

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

LFWC - Large Fresh Water Controllers

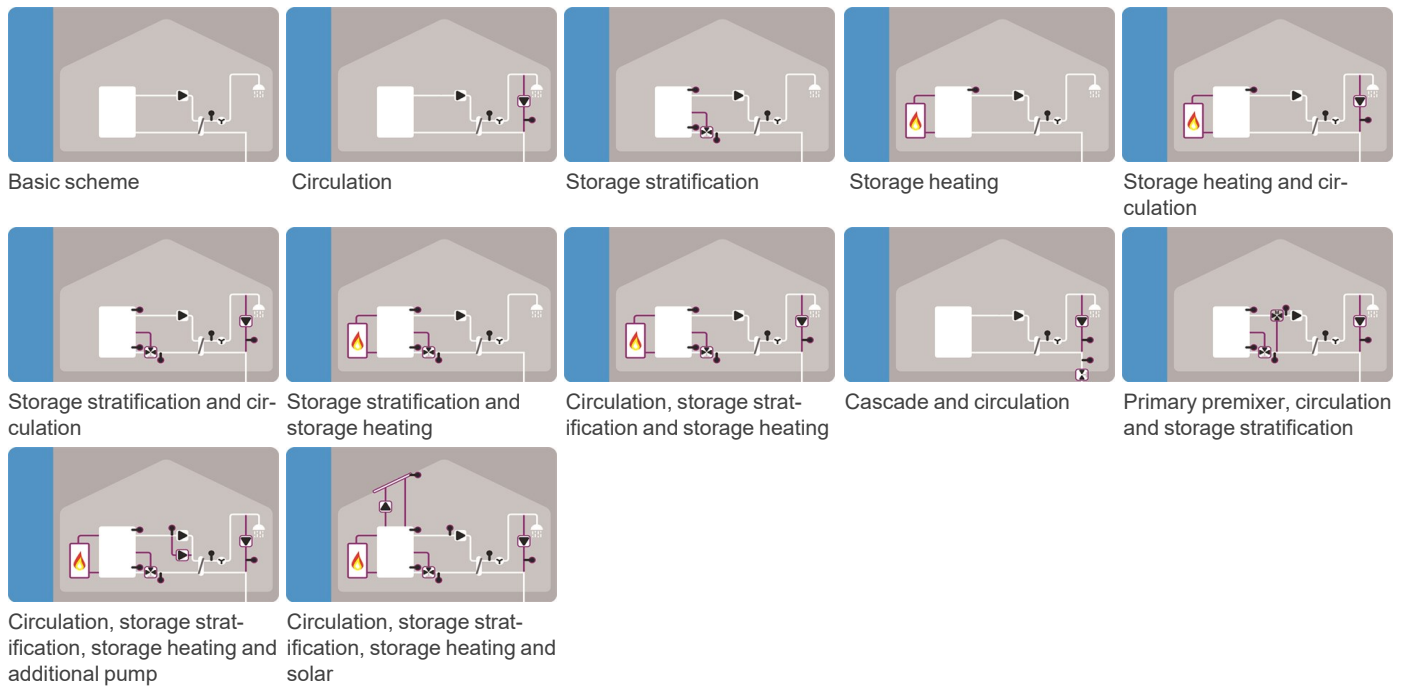
For large fresh water stations with speed-controlled high-efficiency pump and selectable additional functions like pre-control of primary Temperature, storage zone valve, additional control of circulation pump and one Solar pump.

Inputs / Outputs	Connectivity	Menu Languages	New: additional sensors and 0-10V/PWM outputs.
<div>5 + 3* Pt1000</div> <div>4x 230 VAC</div>	<div>Data logger</div> <div></div>		
<div>1x VVX/VFS/VTY</div> <div>1x 230 VAC</div>			
<div>3 + 1* 0-10V/PWM</div>			



* on extension plug

Hydraulic variants LFWC



Recommended Accessories

Data logger



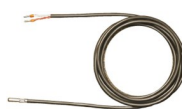
→ Page 60

VVX/ VFS/ RPS
Combined sensor



→ Page 63

Temperature sensors
Pt1000



→ Page 61

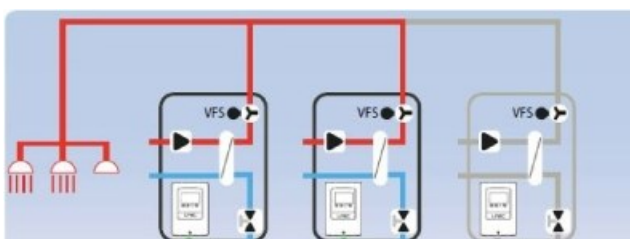
List Prices

Art. No. 47007 - LFWC

on request

Note: Sales only to manufacturers of fresh water systems.

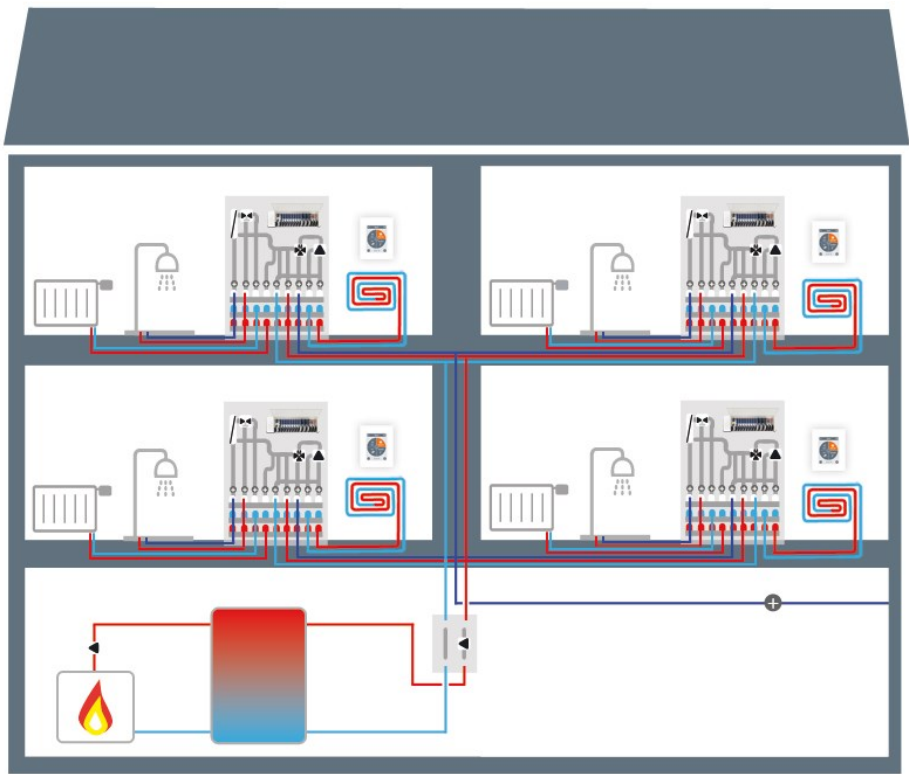
Cascade function



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.

Heat Interface Unit Controller

Controllers for heat interface units control the decentralised fresh water preparation, especially in apartment buildings. Optionally, a weather-compensated heating circuit and the zones of a surface heating system can also be controlled.



Additional contents

Optimising heat interface units with electronic controls



→ <https://sorel.de/en/electronic-heat-interface-unit-blog>

Effective adjustment of fresh water stations



→ <https://sorel.de/en/effective-adjustment-of-fresh-water-stations>

Improve the ErP class of a compound system with heating controllers



→ <https://sorel.de/en/erp-class-compound-system-blog/>

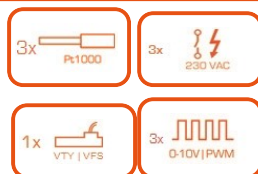


	SHCC Fresh	HCC Fresh
Sensor inputs	4	8
Sensor inputs Flow sensors	1	1
Relay output voltage-free	3	3
Outputs 0..10V or PWM signal	3	2x (0-10V/PWM) / 2x (PWM)
Number of applications	3	5
Extension of pre-defined systems by selectable additional functions	✓	✓
LEDs red/green for display of operating status	✗	✓
Programmable thermostat times and functions per day	2x3	2x3
Comfort function for quick heating	✓	✓
Heating circuit with mixer	1	1
Heating circuit without mixer	✗	1
Domestic hot water function with operating times	✓	✓
Time and Temperature-controlled circulation pump switch	✓	✓
Hot water standby	✓	✓
DHW Priority	✓	✓
Anti-legionella function	✓	✓
Setup wizard	✓	✓
Anti-freeze protection	✓	✓
Seizing Protection	✓	✓
Function control and error memory with date and time	✓	✓
Error memory and analysis with date and time	✓	✓
Menu blocker	✓	✓
CAN bus connection	✗	✓
Data logging on microSD card	via data logger	via data logger
Ethernet connection	via data logger	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 38	Page 39

SHCC Fresh

Heating circuit controller with adjustable setpoint and additional control of fast valves for decentralised fresh water function in heat interface units. Optionally with circulation pump control and warm-keeping function.

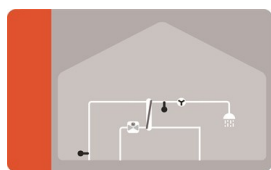
Inputs / Outputs



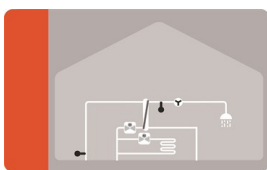
Menu Languages



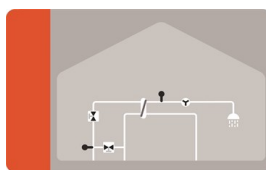
Hydraulic variants SHCC Fresh



Decentralised fresh water control without heating circuit



Decentralised fresh water control with regulated heating circuit



Decentralised fresh water control with valve for hot water standby, temp./flow sensors

Recommended Accessories

VFS Combined sensor



→Page 63

Temperature sensors Pt1000



→Page 61

Pre-wiring



→Page 70

List Prices

Art. No. 47021 - SHCC Fresh VFS

on request

Art. No. 47022 - SHCC Fresh VTY

on request

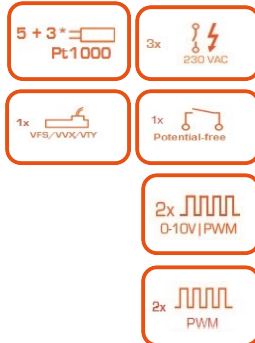


OEM service: We are happy to contribute our experience from over 10 years of fresh water development in order to optimally adjust all control parameters for your fresh water station - for a fast and stable tap temperature in all common tap profiles.

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



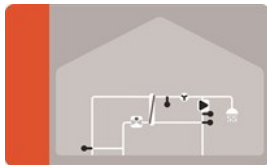
Connectivity



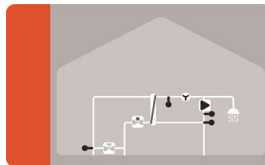
Menu Languages



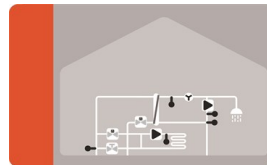
Hydraulic variants HCC Fresh



Decentralised fresh water control without heating circuit



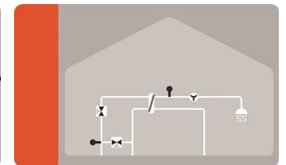
Decentralised fresh water control unregulated



Decentralised fresh water control with regulated heating circuit



Decentralised fresh water control with weather-compensated heating circuit



Decentralised fresh water control with valve for hot water standby, temp./flow sensors

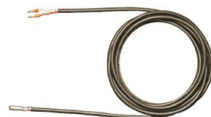
Recommended Accessories

°CALEON Room Controller Smart



→Page 12

Temperature sensors Pt1000



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CAN connection set



→Page 60

VFS Combined sensor



→Page 63

List Prices

Art. No. 27008 -HCCFresh VFS

on request

Art. No. 27009 -HCCFresh VTY

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.

TDC Solar controller

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.

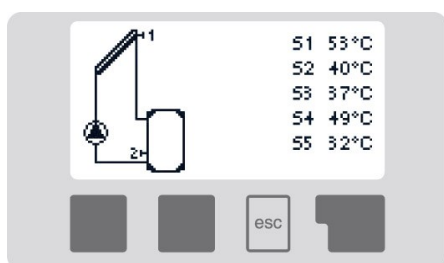
CAN-Bus

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

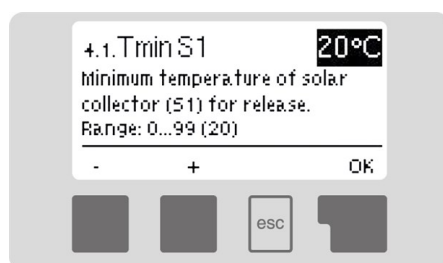
Operator Guidance



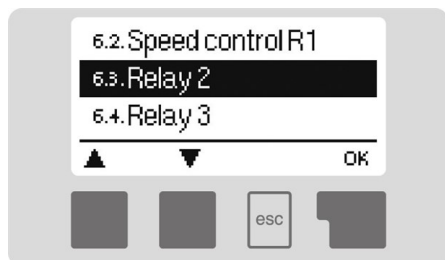
The setup wizard will rapidly guide you through the settings which need to be performed in a logically reasonable sequence. This way, any misadjustment is avoided and the parameterising is simplified.



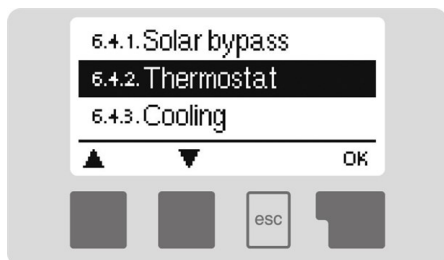
The display of the current measured values and the operating conditions is performed in a graphic mode with animations. Important functions are indicated as icons.



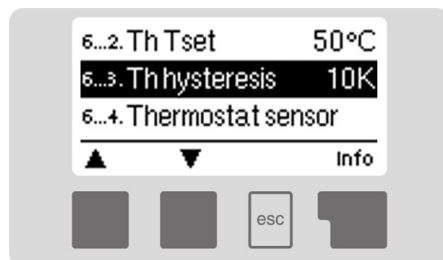
Setup with full text explanation



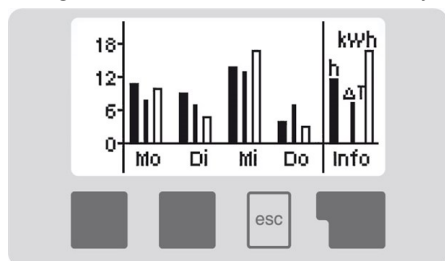
Configuration additional function: Select relay



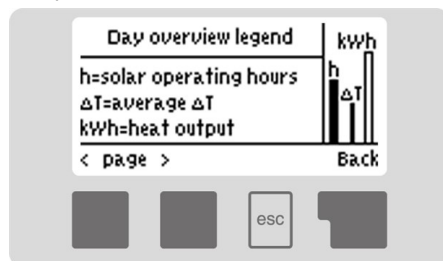
Selecting additional function



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

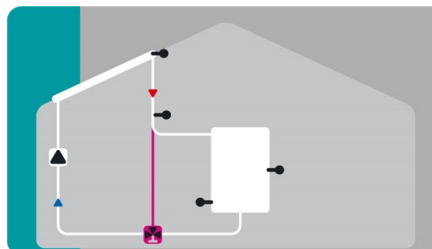
Additional functions for extending predefined schemes

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

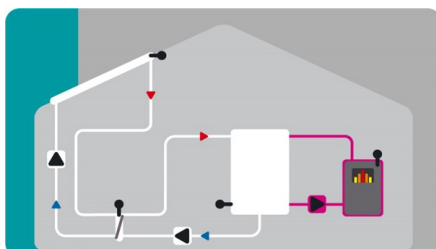
Example:

MTDC System 1 + 



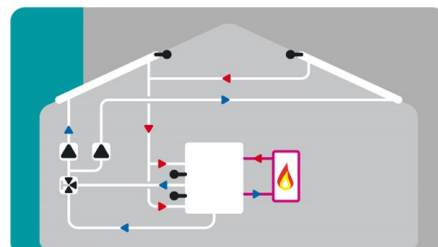
Solar with storage and additional solar bypass function

LTDC System 14 + 



Solar with heat exchanger with additional function Solid Fuel Boiler

XTDC System 20 + 



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



Additional function easily adjusted:

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

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Page 45



LTDC	XTDC	MTDC-E	LTDC-E
6	8	3	4
3	6	1	2
✗	1	1	1
2	2	✗	1
42+	48+	5	8
✓	✓	✗	✗
✓	✓	✓	✓
✓	✓	✓	✓
2	2	✗	✗
2	2	✗	✗
✓	✓	✓	✓
✓	✓	✓	✓
✗	✗	✗	✗
✓	✓	✓	✓
✓	✓	✓	✓
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✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✗	✗	✗
via data logger	✓	✗	✗
via data logger	✓	✗	✗
163 x 110 x 51	228 x 180 x 53	163 x 110 x 51	163 x 110 x 51
RAL 9003	RAL 9003	RAL 9003	RAL 9003
IP40	IP40	IP40	IP40
✓	✓	✓	✓

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Page 53

STDC - Small Temperature Difference Controller

"Small" Temperature Difference Controller for simple systems. For 9 solar, storage and solid fuel boiler-systems. It can be equipped with or without speed-control of standard pumps, high-efficiency pumps or both.



Inputs / Outputs

3x
Pt1000

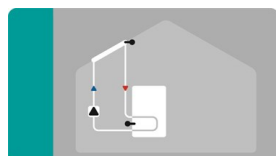
1x
230 VAC

1x
0-10V/PWM

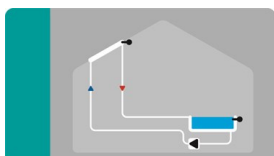
Menu Languages



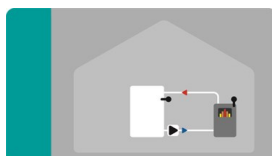
Hydraulic variants STDC



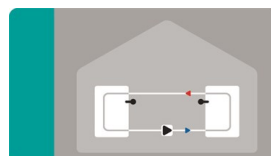
Solar with storage



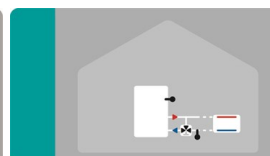
Solar with pool



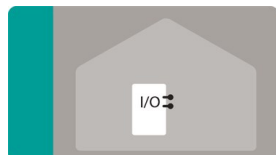
Solid fuel boiler with storage



Storage transfer



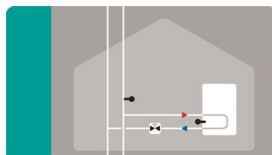
Return flow increase



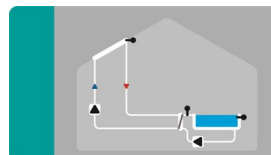
Thermostat function



Universal Delta T



Stop 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

from quantity	1	10	20	40
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Art. No. 10203 -STDC with 2 sensors TT/ S2 PT1000

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

Art. No. 10303 -STDC 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.

MTDC - Temperature Difference Controllers

"Medium" Temperature Difference Controller for midsize systems. For 25 basic systems with additional functions for unused relays. It can be equipped with or without speed-control of standard pumps, high-efficiency pumps or both.



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

Hydraulic variants MTDC - Includes STDC variants plus:



Recommended Accessories

Temperature sensors
Pt1000



→ Page 61

Immersion sleeves



→ Page 62

Data logger



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Art. No. 16005 - MTDC				
from quantity	1	10	20	40
Art. No. 16305 - MTDC with 3 sensors TT/S2 PT1000				
from quantity	1	10	20	40

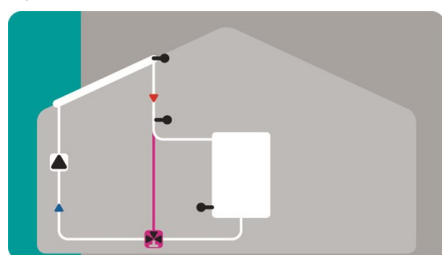
Art. No. 16205 - MTDC with 2 sensors TT/S2 PT1000				
from quantity	1	10	20	40

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

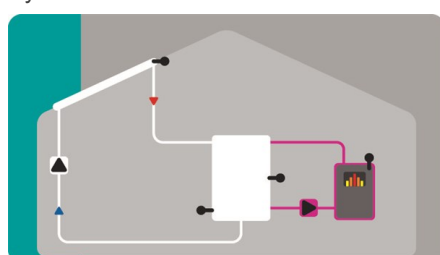
Example:

System 1 + 



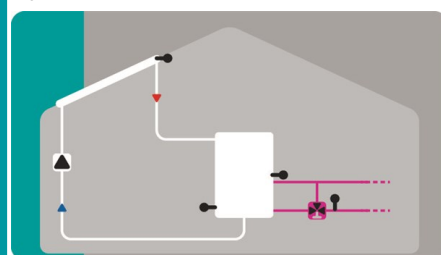
Solar with storage and additional solar bypass function

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:

7.7.Relay 1	Heating circ. 1
7.8.Relay 2	
7.9.Relay 3	
▲ ▼	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					Art. No. 17303 -LTDC with 3 sensors TT/ S2 PT1000				
from quantity	1	10	20	40	from quantity	1	10	20	40

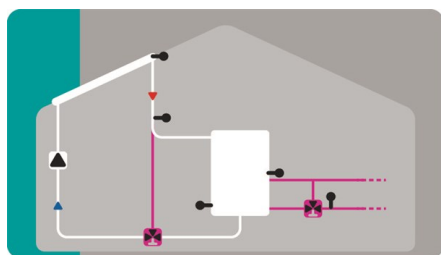
Art. No. 17403 -LTDC with 4 sensors TT/ S2 PT1000					Art. No. 17503 -LTDC with 5 sensors TT/ S2 PT1000				
from quantity	1	10	20	40	from quantity	1	10	20	40

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

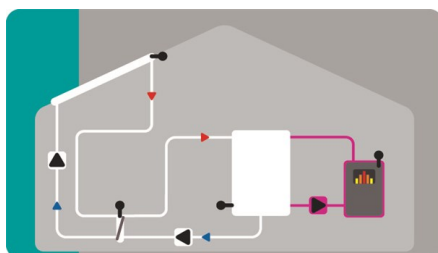
Example:

System 1 + ☉ + ❄️



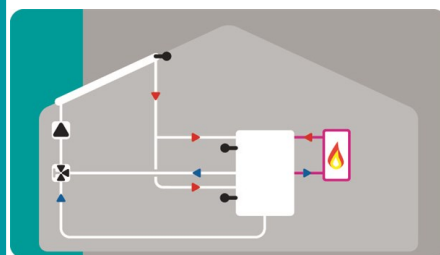
Solar with storage with additional functions
Solar Bypass and Return Flow Increase

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:

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

XTDC- XtraLarge Temperature Difference Controller

Multi-circuit controller for complex solar systems

Inputs / Outputs	Connectivity	Menu Languages
<div>5x Pt1000</div> <div>5x 230 VAC</div> <div>2x VUX/VFS/RPS</div> <div>2x 0-10V/PWM</div> <div>1x RC20</div> <div>1x Potential-free</div>	<div> Lan</div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>



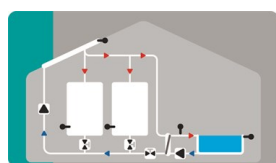
Hydraulic variants XTDC

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

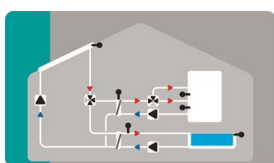
Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

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

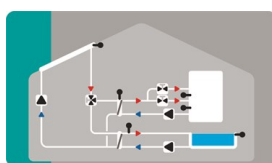
Hydraulic variants XTDC



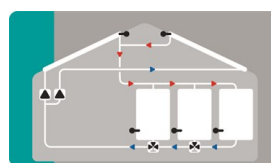
Solar with 2 storages, 3 stop valves and swimming pool with heat exchanger



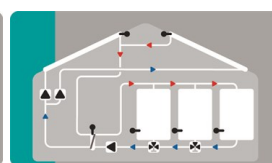
Solar with 2 storages, switching valve, heat exchanger and pool with heat exchanger



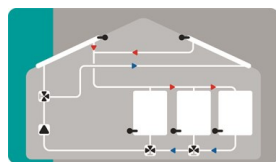
Solar with 2 two-zone storage, 2 stop valves, heat exchanger and pool with heat exchanger



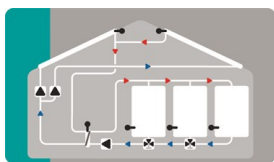
Solar with 2 collector and 3 storages with 2 switching valves



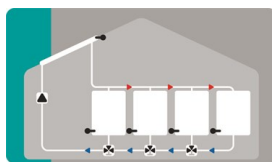
Solar with 2 collector, 3 storages with 2 switching valves and heat exchanger



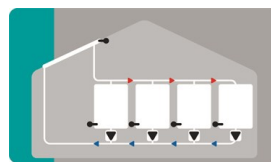
Solar with 2 collector with 1 valve, 1 pump, 3 storages with valves



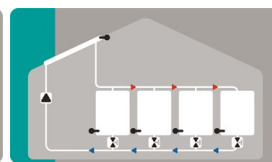
Solar with 2 collector with 2 pumps, 3 storages, heat exchanger and pump



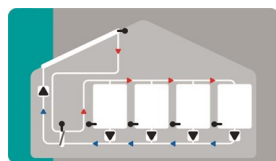
Solar with 4 storages and 3 valves



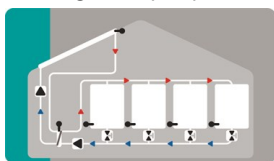
Solar with 4 storages and 4 pumps



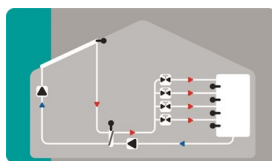
Solar with 4 storages and 4 stop valves



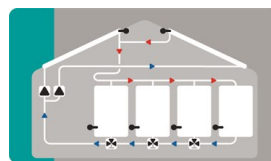
Solar with 4 storages, 4 pumps and heat exchanger



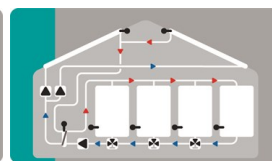
Solar with 4 storages, 4 stop valves and heat exchanger



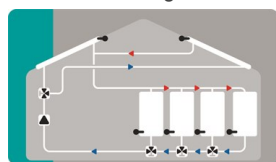
Solar with 4-zone storage and 4 stop valves



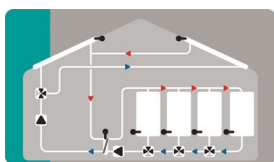
Solar with 2 collectors, 4 storages, 2 pumps and 3 switching valves



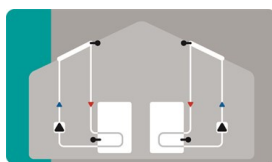
Solar with 2 collectors, 4 storages, 2 pumps, 3 switching valves and heat exchanger



Solar with 2 collectors, 4 storages and 3 switching valves



Solar with 2 collectors, 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. 18002 -XTDC with Ethernet incl. SOREL Connect

from quantity	1	10	20	40
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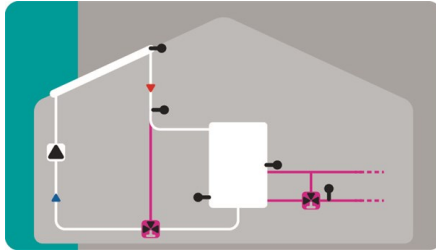
Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.

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

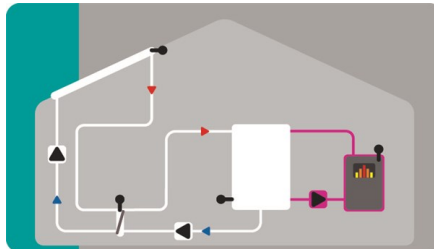
Example:

System 1 + ☉ + ❄️



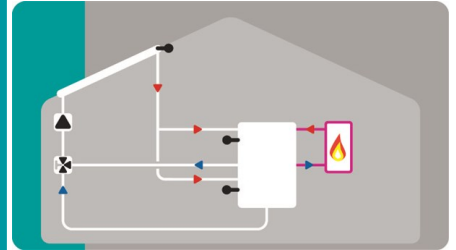
Solar with storage with additional functions
Solar Bypass and Return Flow Increase

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



Additional function easily adjusted:

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

7.Delay 6



OK

1. Select free relay

6.4.Relay 3

1.Anti-legionella

8.Heat transfer

9.Difference

10.Solid fuel boiler

11.Error message

12.Pressure control

13.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

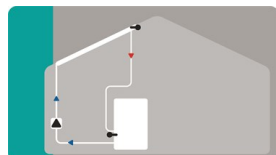
MTDC-E - Temperature Difference Controller

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

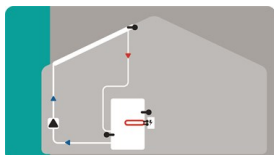
Inputs / Outputs		Menu Languages
3x Pt1000	1x 230 VAC	
1x Voltage free	1x 0-10V/PWM	



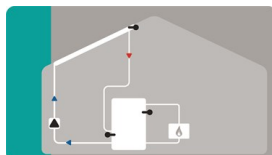
Hydraulic variants MTDC-E



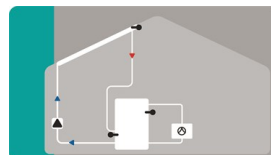
Solar with storage



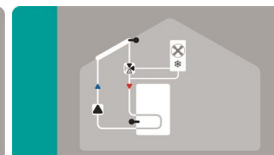
Solar, storage and electric heating rod



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					Art. No. 16206 -MTDC-Ewith 2 sensors TT/ S2 PT1000				
from quantity	1	10	20	40	from quantity	1	10	20	40

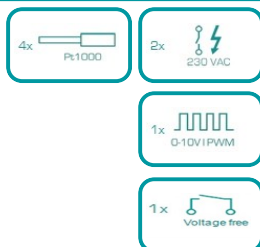
Art. No. 16306 -MTDC-Ewith 3 sensors TT/ S2 PT1000				
from quantity	1	10	20	40

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

LTDC-E - Temperature Difference Controller

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

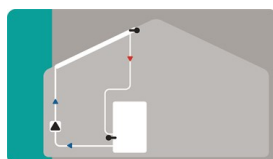
Inputs / Outputs



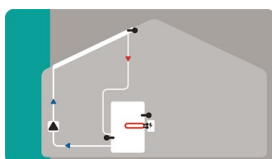
Menu Languages



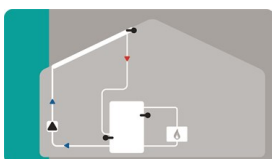
Hydraulic variants LTDC



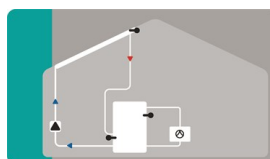
Solar with storage



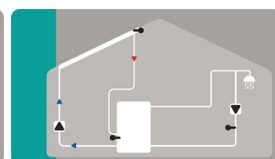
Solar, storage and electric heating rod



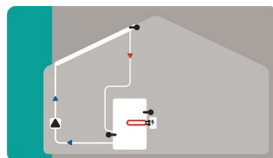
Solar, storage and gas boilers



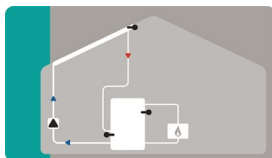
Solar, storage and Heat pump



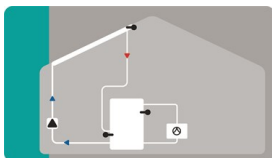
Solar, storage and Circulation



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-E with 3 sensors TT/ S2 PT1000				
from quantity	1	10	20	40	from quantity	1	10	20	40
Art. No. 16407 - LTDC-E with 4 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.

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Pump groups without TDC controller

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)

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 0,5m for expansion tank suitable for all solar groups

Art. No. 77401

Pump groups with TDC controller

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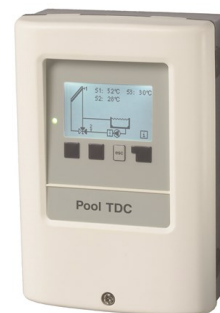
Art. No. 63273 - S2-Solar-30 pump group 1"AG + LTDC + HE Pump
WILO Yonos Para ST25/13 PWM

from quantity	1	5	10	20
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Pump groups from various manufacturers as well as previous versions with standard pumps are available on request.

Pool TDC M / M+ Pool Controller

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.



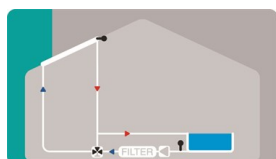
Inputs / Outputs

Menu Languages

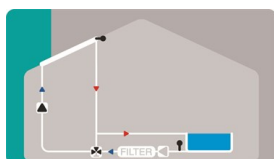


	Pool TDC M	Pool TDC M+
LEDs red/green for display of operating status	✓	✓
Statistics and graphic analysis of data memory	✓	✓
Battery-backed Real Time Clock > 24h	✓	✓
Time and temperature-controlled thermostat function	✓	✓
Setup wizard	✓	✓
Heat request	✓	✓
Filter pump control	✗	✓
Filter pump runtime control (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

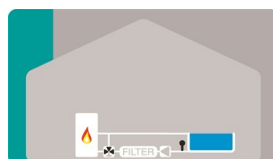
Hydraulic variants Pool TDC M



Pool with solar and ball valve

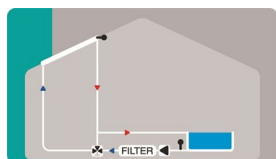


Pool with solar and additional pump

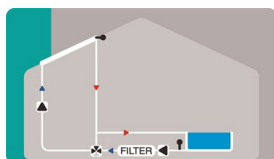


Pool with additional heating and ball valve

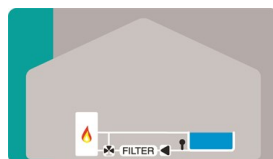
Hydraulic variants Pool TDC M+



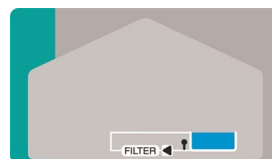
Pool with solar, ball valve and filter pump control



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.

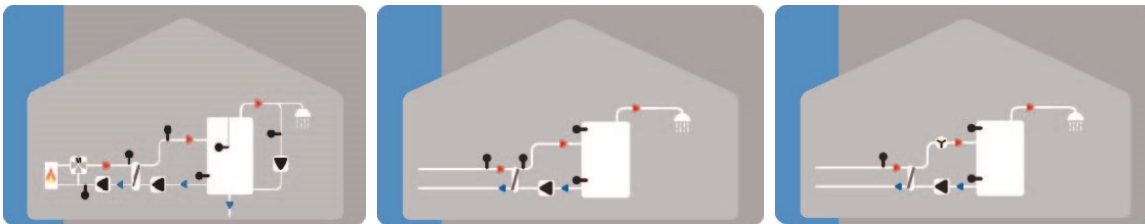
SLC - Storage Loading Controller

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
<div>6x Pt1000</div> <div>4x 230 VAC</div> <div>2x VVX/VFS/VTY</div> <div>2x 0-10V/PWM</div> <div>1x 230 VAC</div>	<div>Data logger</div>	<div>New: function primary mixer integrated</div> <div> </div>



Hydraulic variants SLC



Recommended Accessories

Data logger



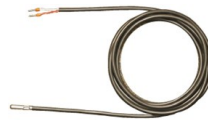
→ Page 60

VVX/ VFS/ RPS
Combined sensor



→ Page 63

Temperature sensors
Pt1000



→ Page 61

List Prices

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

WPC5 - Heat pump controller [discontinued product]

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

6 Pt1000

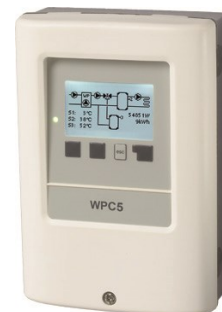
4 230 VAC

1x Potential-free

Menu Languages



Other controllers for heat pump applications with additional functions such as heating and cooling, second heat source and more see also: LHCC page 25, XHCC page 27.



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

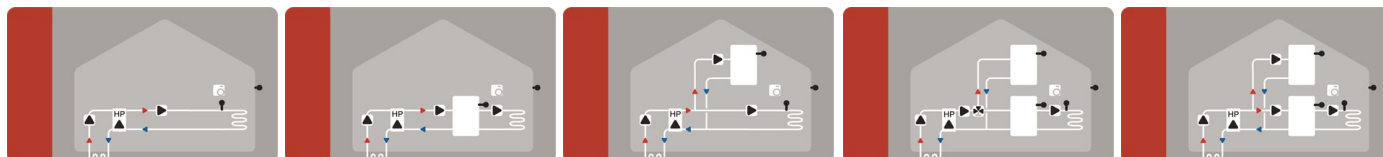
Dimensions Height x Width x Depth in mm

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

from quantity

1

5

10

20

Art.No.35500 -WPC5 with 1 sensor TA55 PT1000 and 4 sensors TT/ S2 PT1000

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 Connect - Monitoring and Analysis

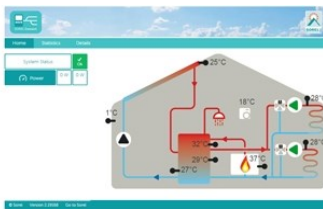


SOREL Connect Controllers enable convenient system monitoring and data logging.

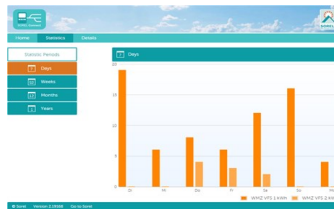
SOREL Connect is the Plug & Play concept which does not require any particular network skills. Using a CAN-bus interface, the controllers can communicate with each other, or be connected with the Internet or via Ethernet. The user can monitor the system at any time and from any location via PC, tablet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



Temperature curves (only with active heat metering)



Technical details for the expert

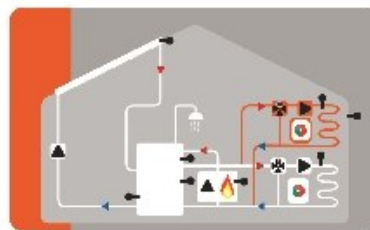
Network Principle



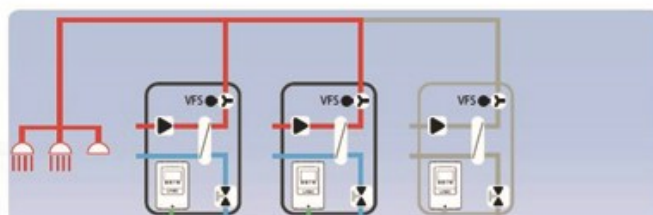
Application example: XHCC with direct Ethernet connection



Application example: MHCC with Ethernet connection via data logger



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



Application example: fresh water cascade



Datalogger [Discontinued product]

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
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CAN connection box

CAN connection box for shielded CAN connection cables

Art. No. 89200	CAN connection box for connecting up to 6 CAN 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.	
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CAN connection set

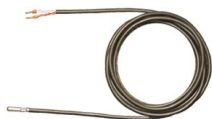
CAN connection set for connecting multiple controllers

Art. No. 89210	CAN connection set 0.3 m shielded twisted pair CAN connection cable 1 x 2 x 0.22 mm ² with 2 Molex plugs, 2 terminating resistors with Molex plugs for end devices	
Art. No. 89211	CAN connection set 1.00 m shielded twisted pair CAN connection cable 1 x 2 x 0.22 mm ² 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.	Price per meter
Art. No. 89298	1-wire connection cable, grey, sold by the metre. Shielded twisted pair 1-wire con- nection cable, 2 x 2 x 0.75 mm ² , especially for applications with several °C-lites and longer cable runs. Cable length selectable from 1-100 m.	Price per meter



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
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Art. No. Art. no. 85240 - TT/ S4 Temperature immersion sensor with 4 m silicone cable, 180 °C

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

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

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

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

from quantity	1	20	50	100
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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
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TA55 Temperature external sensor box



Art. No. 87005 -TA55 Temperature external sensor box

from quantity	1	20	50	100
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Threaded sensor



Art. No. 87118 -ES/ S1 G1/ 8"

from quantity	1	20	50	100
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Art. No. 87112 -ES/ S1 G1/ 2"

from quantity	1	20	50	100
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Immersion sleeves

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



Art. No. Art. no. 91030 - TH30 with 30mm brass immersion pipe, 150°C					Art. No. Art. no. 91045 - TH45 with 45mm brass immersion pipe, 150°C				
from quantity	1	20	50	100	from quantity	1	20	50	100
Art. No. Art. no. 90060 - TH60 w/ nickel-plated 60mm copper imm. pipe, 150/ 180 °C					Art. No. 90100 - TH100 w/ nickel-plated 100mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100	from quantity	1	20	50	100
Art. No. Art. no. 90150 - TH150 w/ nickel-plated 150mm copper imm. pipe, 150/ 180 °C					Art. No. Art. no. 90200 - TH200 w/ nickel-plated 200mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100	from quantity	1	20	50	100
Art. No. 90300 - TH300 w/ nickel-plated 300mm copper imm. pipe, 150/ 180 °C					Art. No. 90400 - TH400 w/ nickel-plated 400mm copper imm. pipe, 150/ 180 °C				
from quantity	1	20	50	100	from quantity	1	20	50	100
Art. No. 92100 - TH100 Estainl. steel imm. sleeve 100mm, test prod up to 300°C					Art. No. 92150 - TH150 Estainl. steel imm. sleeve 150mm, test prod up to 300°C				
from quantity	1	20	50	100	from quantity	1	20	50	100
Art. No. 92200 - TH200 Estainl. steel imm. sleeve 200mm, test prod up to 300°C									
from quantity	1	20	50	100					

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

Sensor

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

VFS 1-12L/ Min 0-100°C, 3/ 4"AG, stainless steel	VFS 2-40L/ Min 0-100°C, 3/ 4"AG, stainless steel
Art. No. 78018	Art. No. 78040
VFS 5-100L/ Min 0-100°C, 1", stainless steel	VFS 10-200L/ Min 0-100°C, 1 1/ 4" stainless steel
Art. No. 78100	Art. No. 78200
VFS 20-400L/ 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. 09028 -100x fuse 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 24VDC 12W

€/per piece

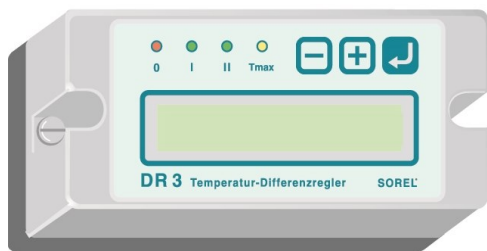
Switching power supply 24VDC 12W



Art. No. 77507 -Switching power supply 24VDC 30W

€/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



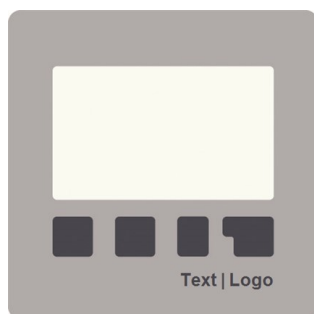
Whenever circumstances require it, we go the extra mile for our OEMs. For example, we sent a technician at short notice to a steel factory close to our headquarters for troubleshooting an urgent hydraulic problem on behalf of an Italian customer – the system was then up and running again. We spontaneously 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

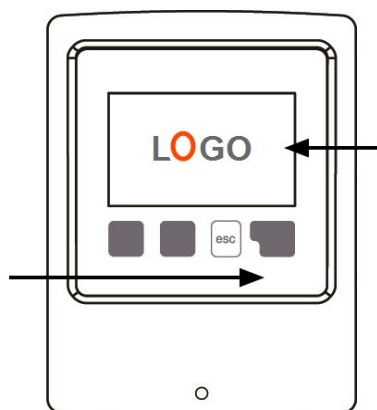
Special net prices, not subject to discounts

Customization S Controllers



STDC front label, plastic, up to 4 colours

€/per piece	
Minimum order quantity	1.000 front labels



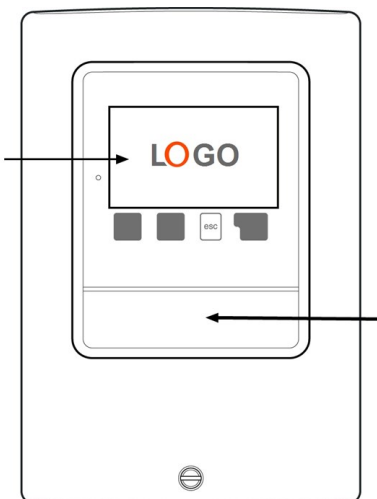
Company logo in display at startup

One off cost

Customization M, L and X Controllers

Company logo in display at startup

One off cost



Text | Logo

TDC/ HCC.. front label, paper paperstrip in a transparent plastic window

€/per piece	
One off cost	

Text | Logo

TDC/ HCC front label, plastic, up to 4 colours

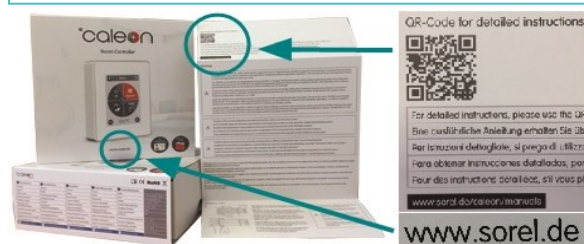
€/per piece	
Minimum order quantity	500 front labels

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
One off cost	



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

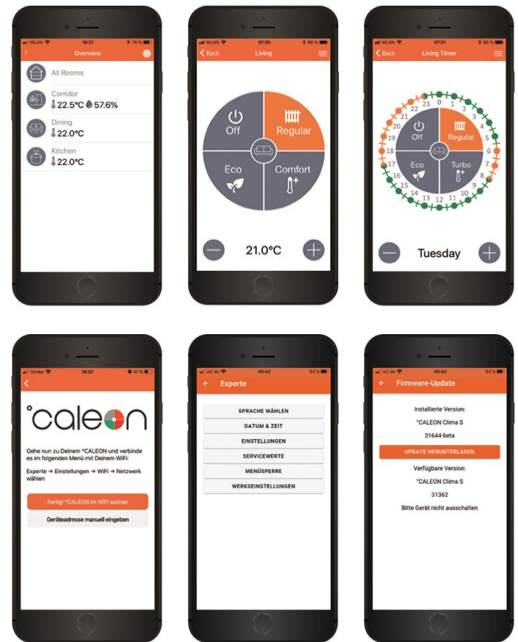
SOREL GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

Customized app



Customization °CALEON app
Customization of color, font and icons and launch in appstore

One off cost	
Service fees/year	
Customized app with custom functionality	
	on request



Customized packaging



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

One off cost	
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Additional manual (e.g. other languages)

€/per piece	
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Parcel stickers / packaging bags
(Dimensions: 70 mm x 25.4 mm, b/ w)

€/per piece	
One off cost	



Sensors in labeled plastic bags

€/per piece	
One off cost	



Customized manual
(customer's logo, name, address, contact information)

One off cost	
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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!



Smart Home
Bus Systems
Z-wave
Automation
Radio Communication
Visualisation
HVAC
Apps
Control Engineering
Hardware
Digital Transformation
Internet Of Things
Pcb Design
Heating
Wireless
Electronics
Sourcing Of Components
Building Management Systems
Software

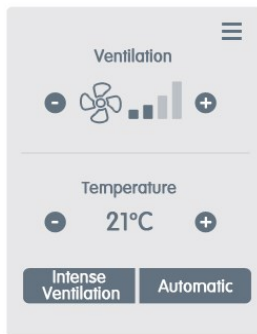
Please contact us: oem@sorel.de

OEM Touchpanel

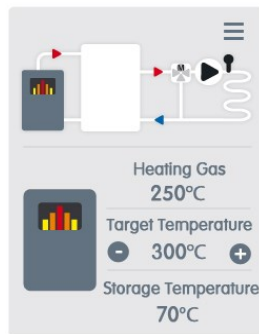


Based on our classy control panel with capacitive TFT touch display and elegant glass cover, we are pleased to develop an individual product for your application together. Using the existing hardware, operating system and various software modules is the smartest way towards your specific solution with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

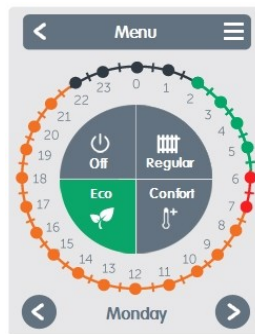
Application Examples



Ventilation Control (2.8")



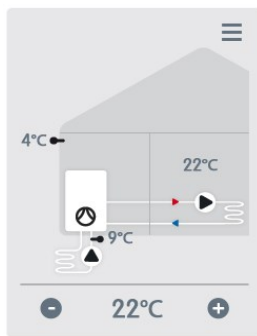
Wood-Burning Stove Control (2.8")



Universal Timer (2.8")



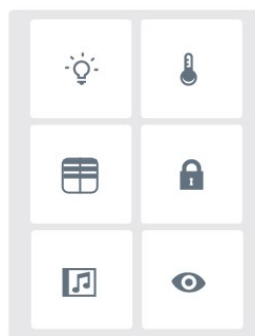
Smart Thermostat (2.8")



Heat Pump Control (3.5")



Energy Manager (3.5")



Smart Home Central Unit (3.5")



System Controller for Boiler Panels (4.3")

Hardware Options



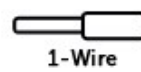
WLAN



0-10V/PWM



CAN bus



1-Wire



Potential-free

Please contact us: oem@sorel.de

Pre-wiring

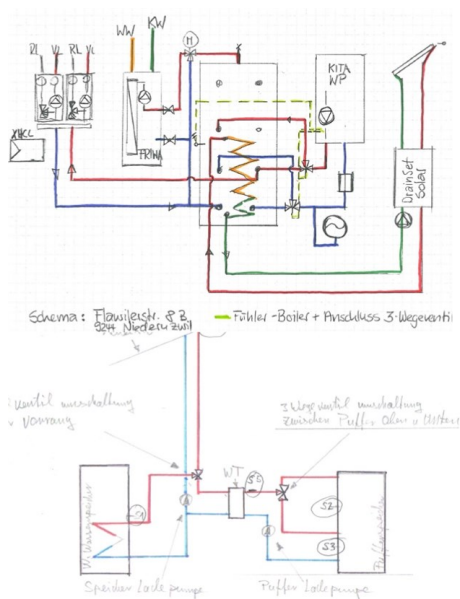


Pre-wiring ex works strongly simplifies the installation on site. It saves time during assembly, prevents mistakes and provides a cost advantage due to the industrial wiring in large quantities. We happily arrange the right solution for your application from our broad selection of ready-for-use cable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

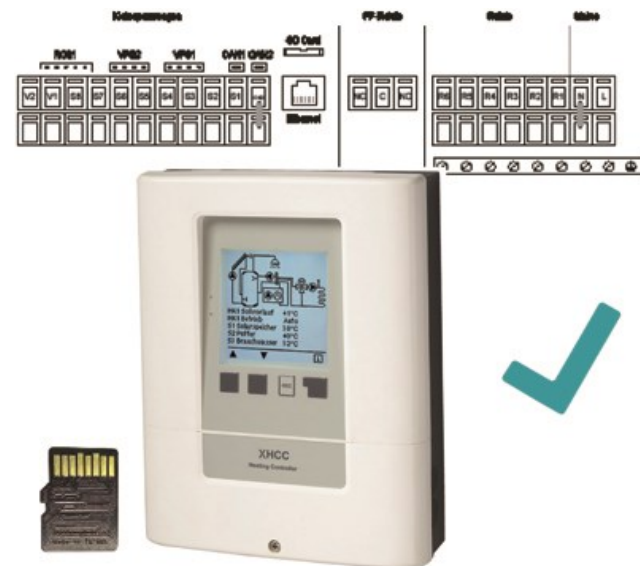
Please contact us: oem@sorel.de

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.

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The illustrations should be viewed only as schematic diagrams showing the respective hydraulic systems, and do not claim to be complete. The controller does not replace safety devices under any circumstances. Depending on the specific application, additional system components and safety components may be mandatory, such as check valves, non-return valves, safety temperature limiters, scalding protectors, etc., and must therefore be provided. The quoted prices are to be understood per unit ex works (EXW according to Incoterms) Wetter (Ruhr) plus VAT. Standard customer discounts apply to orders over 50 €. Freight costs are charged depending on the required workload. Discounts are granted upon written request. Versions may differ from the illustrations. Subject to change without notice. The current terms and conditions of SOREL GmbH Mikroelektronik as can be seen on www.sorel.de shall apply. Actual products may differ from images. All rights reserved.

3/16/2023

* 0,14 EURO/Min. aus dem Festnetz der T-Com. Mobilfunk max. 0,42 EURO/Min. (only for Germany)