SOREL Mikroelektronik GMBH

CATALOGUE
2019/2020

Thermal Control Made Simple

°caleon

Menu

Off Regular Eco Comfort

21.5 °C

www.sorel.de
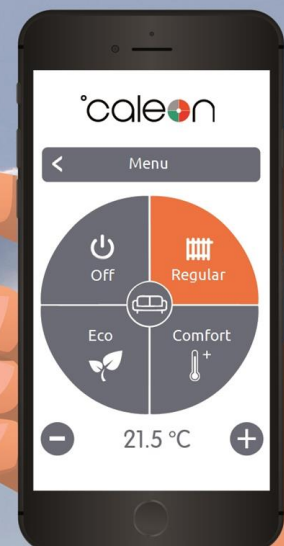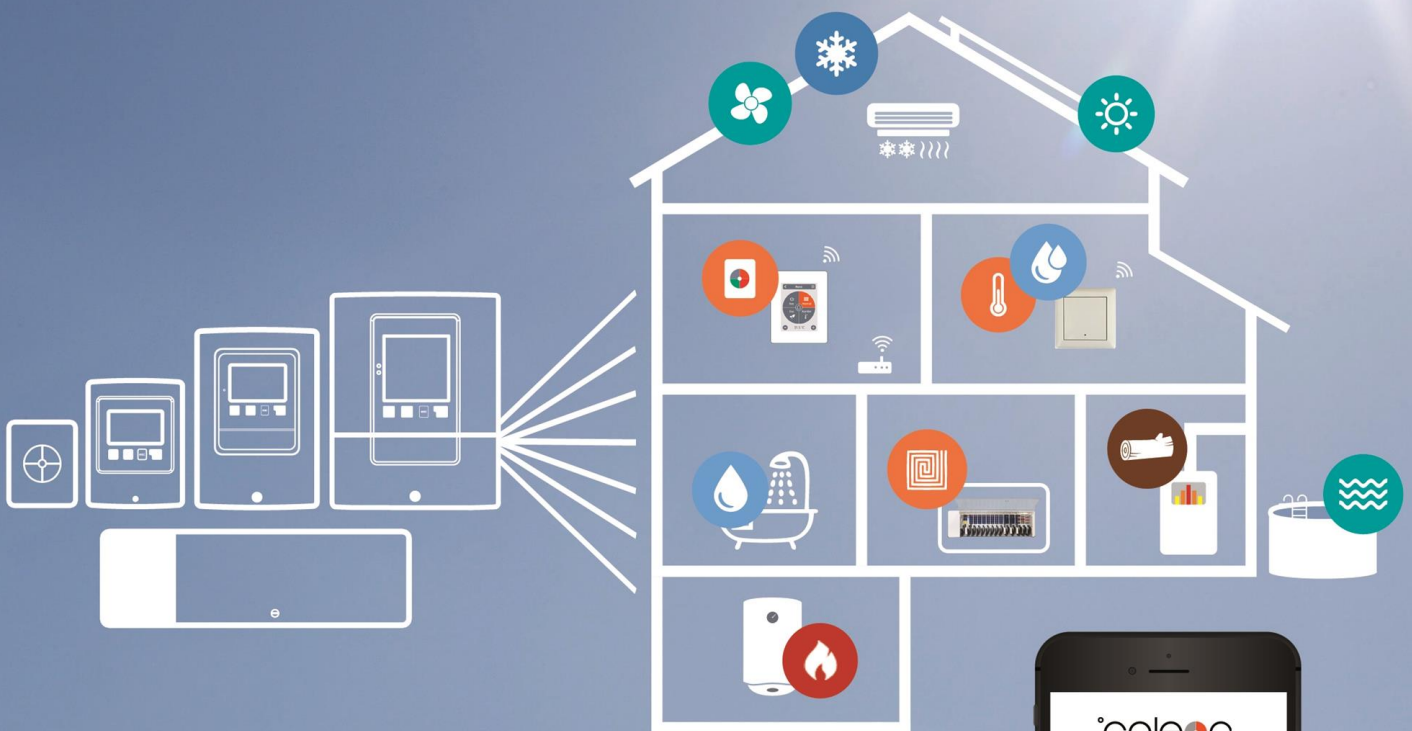
Dear SOREL Customer

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

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

- elegant °CALEON Smart Thermostats with Internet connection and matching **°CALEON app** on page 17.
- the °CALEONbox series on page 13 with suitable °CALEON Room Controllers for convenient **multi-zone control of underfloor heating and cooling**. Optionally with WiFi and smartphone app.
- for combined temperature control of heating and domestic hot water for **heat interface units**, you will find the new °CALEONbox Fresh on page 14.
- new **smart grid** function in the HCC controllers for efficient use of electricity surpluses
- optimised control behaviour in case of strong hot water load changes in the FWC series, as well as optional **LIN bus** interface.
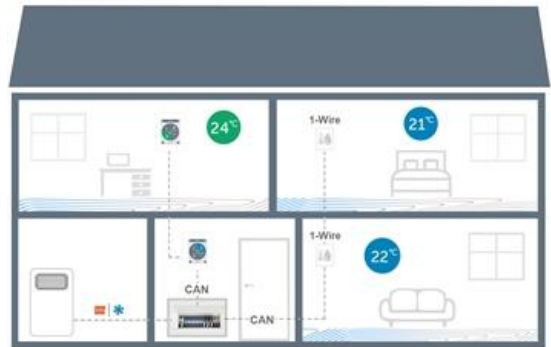
We would be pleased if there is something suitable for you. If not, we would be happy to have a chat with you on a tailor-made OEM development. In any case, we look forward to hearing from you and are at your side with advice and assistance!

Jonas Bicher and Georg Bicher, CEOs

CONTENT

Legend

Icon	Description	Icon	Description	Icon	Description	Icon	Description
Sensors	Sensor inputs	0-10V|PWM	0-10V or PWM signal	LAN	Ethernet connection	WLAN	WLAN
RC20|RC21	Room sensors		Voltage free Relay	LIN	LIN-Bus	°CALEON App	°CALEON App
VFS|RPS	Direct sensors		Integrated temp. and humidity sensor	TDC	Connectivity to SOREL Controllers	Class VIII 5%	Maximum attainable Temperature control class
230 VAC	Relay outputs with closing contact	24VDC 6W e.g. 3x °CALEON	Voltage output for external devices	°CALEON	Connectivity to °CALEON		
230 VAC	Relay outputs with changeover contact	Data logger	Connectivity Data logger	caleon box	Connectivity to °CALEONbox		

Heating Circuit Controllers HCC

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

HCC	MHCC
Sensor inputs	4
of which for Pt1000 temperature sensors	3
of which for remote adjuster	1
of which for Direct Sensors VVX / VFS / RPS Temperature	0
of which for Direct Sensors VVX / VFS / RPS flow	0
Compatible room thermostat	°CALEON / RC20 / RC21
Relay outputs 230V	3
Relay output voltage-free	✕
Outputs 0..10V or PWM signal (for modulating burner control)	1
24VDC output for external devices	✕ up to 2W
Number of applications	2
Extension of pre-defined systems by selectable additional functions	✕
LEDs red/green for display of operating status	✓
Programmable thermostat times and functions per day	3
Comfort function for quick heating	✓
Heating circuit with mixer	✓
Heating circuit without mixer	✕
Cooling function for heating circuits	✕
Dew point correction in "Cooling" mode	✕
Heat pump control	✕
Season switch "Heating / Cooling"	✕
Cooling function with air conditioning	✕
Domestic hot water function with operating times	✕
Circulation of domestic hot water with operating times	✕
Legionella protecion 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 ü ü Power supply for universal	✓
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 6

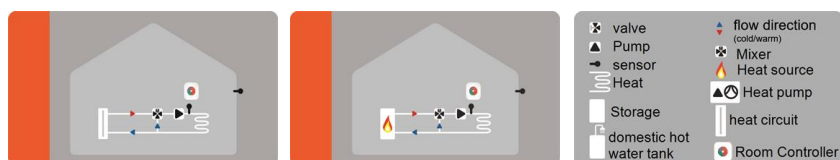|	LHCC	XHCC
	10	17
	6	11
	1	2
	2	2
	2	2
	°CALEON / °CALEON Clima / RC20 / RC21	°CALEON / °CALEON Clima / RC20 / RC21
	3	6
	1	1
	2	4
	✔ up to 6W	✔ up to 6W
	22	13
	✔	✔
	✔	✔
	2 x 3	2 x 3
	✔	✔
	0 - 2	0 - 2
	0 - 2	0 - 2
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
	✔	✔
		✔
	via data logger	✔
	via data logger	✔ (only at V2)
	163 x 110 x 51	228 x 180 x 53
	RAL 9003	RAL 9003
	IP40	IP40
	✔	✔
	Page 7	Page 9

MHCC - Medium Heating Controller

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

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

Hydraulic variants MHCC

	Symbol legend
	⊠ valve
	▲ Pump
	→ sensor
	Heat
	Storage
	domestic hot water tank
	flow direction (cold/warm)
	⊛ Mixer
	Heat source
	▲ Heat pump
	heat circuit
	⊙ Room Controller

Recommended Accessories

°CALEON Room Controller	Data logger	Temperature sensors Pt1000	External switching relay 0-10VDC	Outdoor sensor TA55
→ Page 20	→ Page 53	→ Page 55	→ Page 60	→ Page 55

List Prices

Art. No. 23001 - MHCC				
from quantity	1	5	10	20

Art. No. 23201 - MHCC Set with 2 Pt1000 sensors (TR / S2 and TA55)				
from quantity	1	5	10	20

Art. No. 23301 - MHCC Set with 3 Pt1000 sensors (TT / S4, TR / S2 and TA55)				
from quantity	1	5	10	20

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

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

6x Pt1000
3x 230 VAC
2x VVX/VFS/RPS
2x 0-10V | PWM
1x RC20 | RC21
1x Potential-free
24VDC 6W e.g. 3x °CALEON

Connectivity

°CALEON
HCC
Data logger
TDC
FWC
°caleon box

Menu Languages

Hydraulic variants LHCC

Symbol	Meaning
valve	flow direction (cold/warm)
Pump	Mixer
sensor	Heat source
Heat	Heat pump
Storage	heat circuit
domestic hot water tank	Room Controller

Recommended Accessories

°CALEON Room Controller	°CALEON Clima Room Controller	Data logger	CAN connection set	Temperature sensors Pt1000
→Page 20	→Page 21	→Page 53	→Page 53	→Page 55

Art. No. 27005 - LHCC				
from quantity	1	5	10	20

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

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

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

Art. No. 27335 - LHCC Set with 3 Pt1000 sensors TR/S2, TA55, TT/S4 and external relay 1W 6A and PWM actuators				
from quantity	1	5	10	20

LHCC - Additional functions for free relays

- Thermostat
- Return flow increase
- Transfer
- Difference
- Solid fuel boilers
- Free Cooling
- Dehumidifier
- Error message
- Pressure monitoring

- Parallel operating with R1
- Parallel operating with R2
- Always on
- Heat circuit 1/ 2
- Solar
- Burner
- Compressor
- Boiler pump
- Remote

- HP Compressor
- DHW Valve
- Cooling Valve
- circulation
- Heating rod
- RLA Mixer
- Dissipation
- Season Switch

Example:

System 1 + ⬤⦿
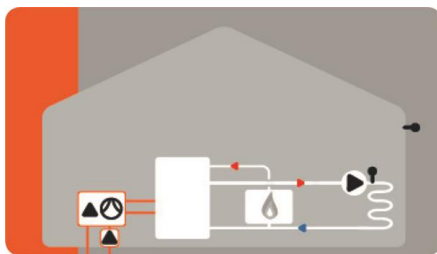
Combined storage with heating circuit with additional functions glycol pump and compressor.

System 2 + ⬛ + ⬛
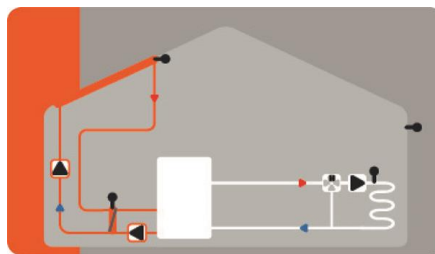
Combined storage with mixed heating circuit with additional functions solar and heat exchangers.

System 8 + ⬛⬛
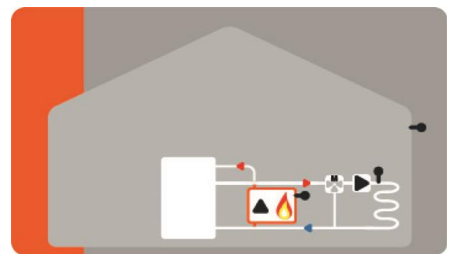
Combined storage or buffer storage with mixed heating circuit with additional function burner and boiler pump.

XHCC - XtraLarge Heating Circuit Controller

Weather-compensated heating controller for complex systems with up to two mixed heating and cooling circuits, different heat sources and free assignable functions for unused relays.
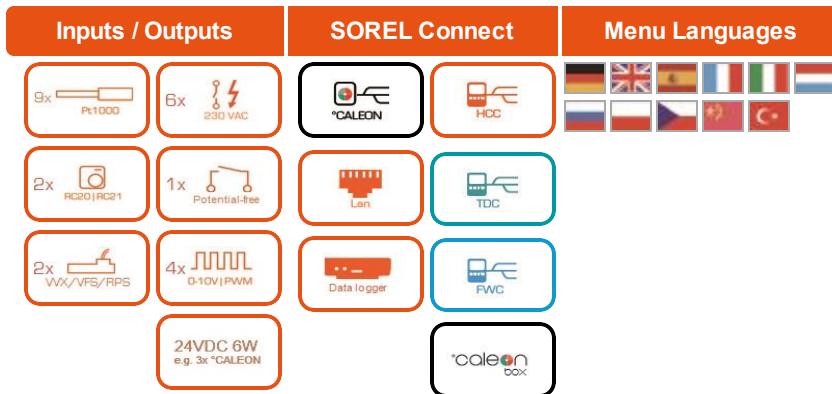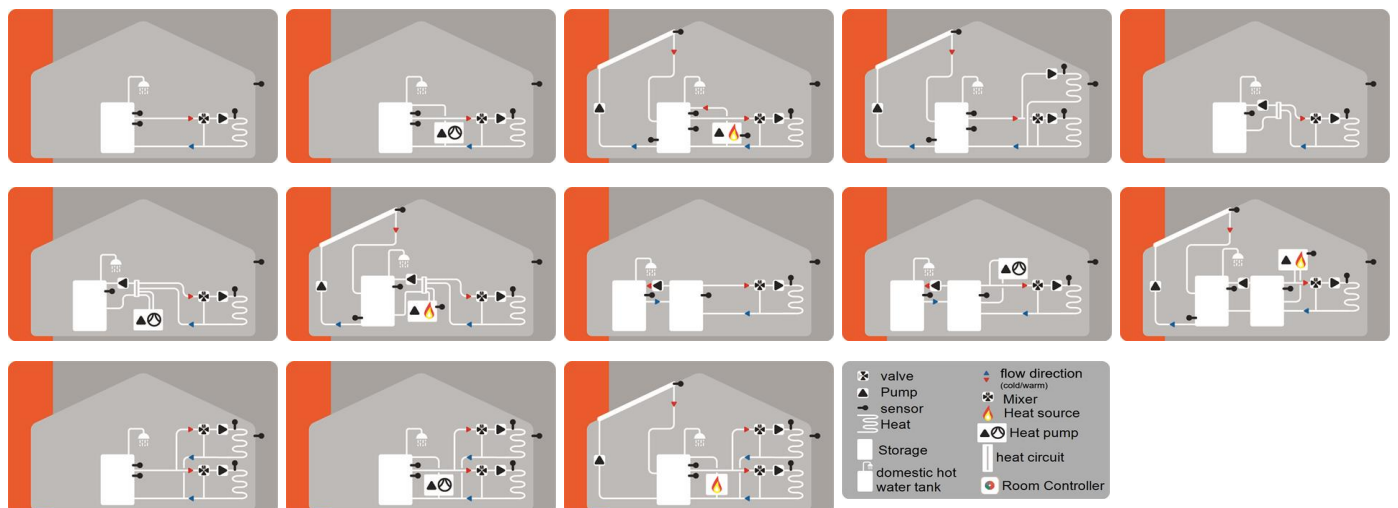
Inputs / Outputs	SOREL Connect	Menu Languages

Inputs / Outputs
- 9x Pt1000
- 6x 230 VAC
- 2x RC20 | RC21
- 1x Potential-free
- 2x VVX/VFS/RPS
- 4x 0-10V | PWM
- 24VDC 6W e.g. 3x °CALEON

SOREL Connect
- °CALEON
- HCC
- Lan
- TDC
- Data logger
- FWC
- °caleon box

Hydraulic variants XHCC

⋈ valve	▲ flow direction (cold/warm)
▲ Pump	✱ Mixer
↝ sensor	🔥 Heat source
≣ Heat	▲⊘ Heat pump
▯ Storage	heat circuit
▯ domestic hot water tank	⊙ Room Controller

Recommended Accessories

°CALEON Room Controller	°CALEON Clima Room Controller	System-Dependent Pre-Parametrisation	Temperature sensors Pt1000	Immersion sleeves
→ Page 20	→ Page 21	→ Page 66	→ Page 55	→ Page 58

List Prices

Art. No. 28001 - XHCC without Ethernet					Art. No. 28002 - XHCC with Ethernet				
from quantity	1	5	10	20	from quantity	1	5	10	20

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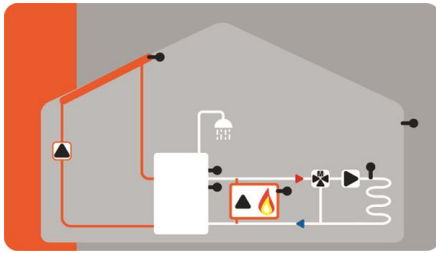
Combined storage tank with mixed heating circuit with additional function solar and additional heating with pump.

System 2 + **+**
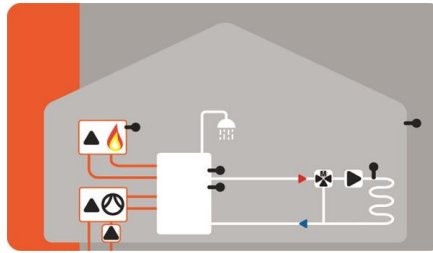
Combined storage tank with mixed heating circuit with additional function, additional heating and heat pump / compressor with brine pump.

System 8 +
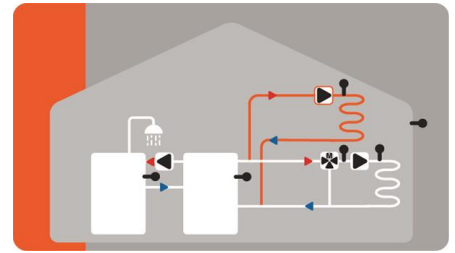
Combined storage tank with buffer storage tank with mixed heat circuit with additional function 2nd heating circuit.

MHCC as an extension Module for 1 Mixed Heating Circuit each
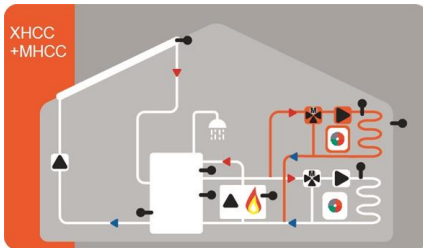
XHCC standard system: Combined storage with solar, gas boiler and heating circuit. An MHCC with °CALEON adds another heating circuit.
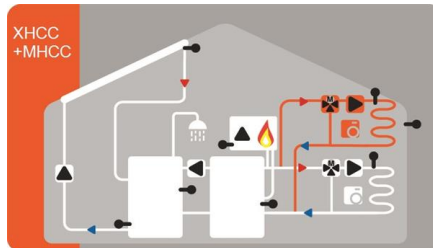
XHCC standard system: Buffer and hot water storage with solar, gas boiler and heating circuit. An MHCC adds another heating circuit.
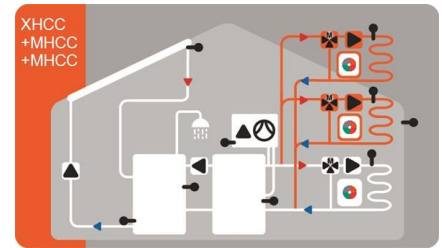
XHCC standard system: Buffer and hot water storage with solar, heat pump and heating circuit. Two MHCCs with °CALEON add two heating circuits.

LHCC with °CALEON Clima as an extension for 1 Heating and Cooling Circuit
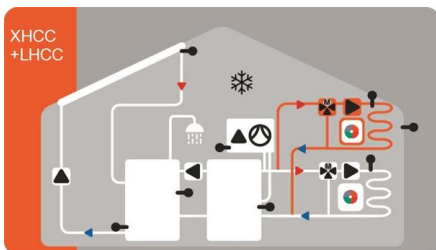
XHCC standard system: Buffer and hot water storage with solar, heat pump and heating and cooling circuit extended by 2 LHCC and 2 °CALEON Clima for an additional heating and cooling circuit.
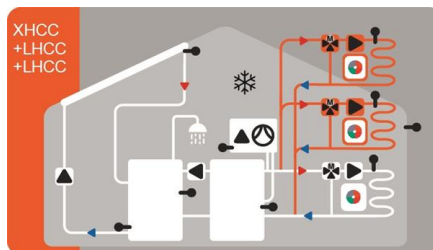
XHCC standard system: Buffer and hot water storage with solar, heat pump and heating and cooling circuit extended by 1 LHCCs and 1 °CALEON Climas for two additional heating and cooling circuits.

Heating circuit group

Heating circuit group MHCC

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

- Size: 466 x 250 x 215 mm
- PN10, max. Temp. 110 °C, KVS 6,0
- Flow right, return left
- 2 ball valves with integrated thermometer
- external connector 1" Female
- Speed controlled High efficiency pump
- Wilo Stratos Pico 25/1-6

- 3-way-mixing valve with KVS 10,0
- Servomotor with 90° operating range
- Heat Circuit Controller MHCC
- completely prewired with connection box
- Outdoor sensor TA55, flow sensor TR/S1.5

Art. No. 60550 - Heating circuit group MHCC				
from quantity	1	5	10	20

Heating circuit group MHCC

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

- Size: 466 x 250 x 215 mm
- PN10, max. Temp. 110 °C, KVS 6,0
- Flow right, return left
- 2 ball valves with integrated thermometer
- external connector 1" Female
- Speed controlled High efficiency pump
- Wilo Stratos Pico 25/1-6

- 3-way-mixing valve with KVS 10,0
- Servomotor with 90° operating range
- Heat Circuit Controller LHCC
- completely prewired with connection box
- Outdoor sensor TA55, flow sensor TR/S1.5
- L-Connection-Box for easy connection of additional sensors and CAN without opening the controller.

| Art. No. 60555 - Heating Circuit Group LHCC				
from quantity	1	5	10	20

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
SOREL GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

11

°CALEONbox

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

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

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

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

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

Built-in setup wizard to facilitate fast and correct commissioning

Preventive dew point calculation based on relative humidity in the rooms

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

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

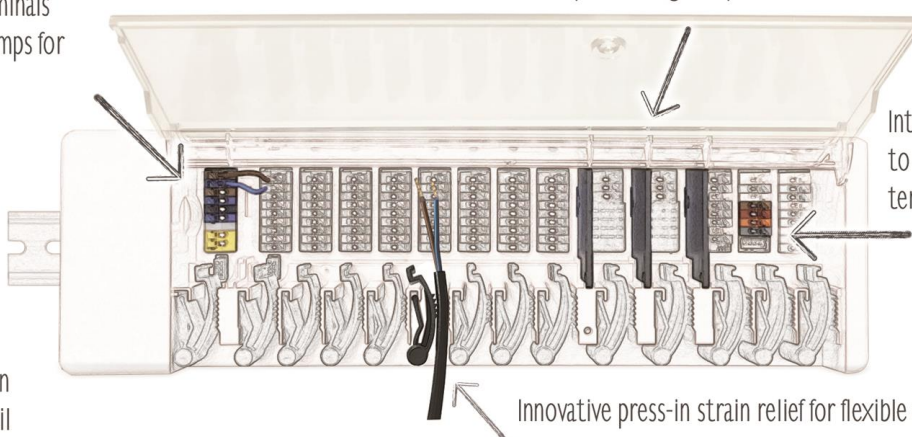## Easy installation

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

Removable dividers and front cover for more space during clamp connection

Intuitive wiring thanks to colour-coded clamp terminals

Easy installation also on DIN rail

Innovative press-in strain relief for flexible wires

Overview

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

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

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

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

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

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

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

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

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

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

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

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

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

°CALEONbox

°CALEONbox

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

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

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

°CALEONbox Clima

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

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

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

°CALEONbox Fresh

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

Inputs / Outputs				Connectivity	
20x 1-Wire	2x 0-10V | PWM	32x 8-Zones	9x 230 VAC	°CALEON	FWC
1x VFS		2x Potential-free	3x 0-10V | PWM	HCC	
		24VDC 20W e.g. 8x °CALEON			

Note: Sales only to manufacturers of fresh water systems.

We'll happily contribute with our 10+ years experience in developing fresh water systems, and support you in the initial adjustment of all control parameters to your stations - for quick and precise tapping temperatures in every common tapping situations.

Art. No. 74003 - °CALEONbox Fresh				
from quantity	1	5	10	20

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

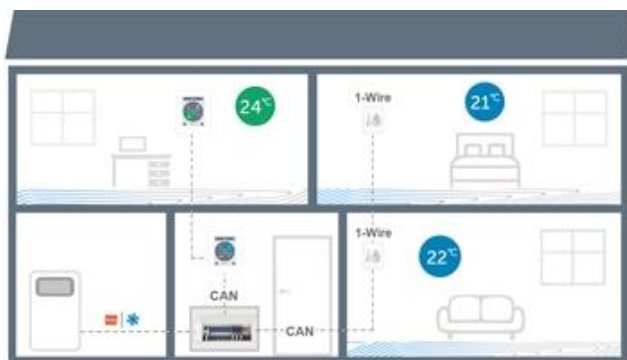### Zone control in a single-family house with heat request:

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

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

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

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

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

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

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

Heating and cooling in offices/hotels/commercial buildings:

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

Multi-family house with decentral fresh water control:

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

°CALEONbox Configurator

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

Start Configurator:

https://caleonbox.sorel.de
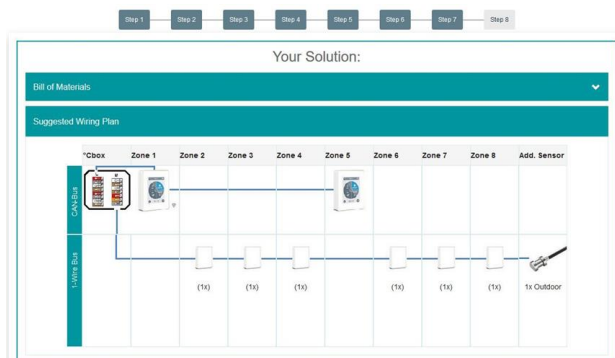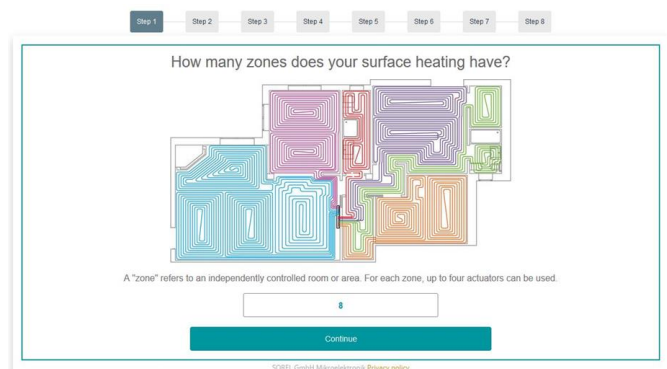
Room Sensors for °CALEONbox

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

Room Sensor 1-Wire	Room Sensor Clima 1-Wire	Room Sensor 1-Wire	Room Sensor Clima 1-Wire
Digital room temperature sensor with communication via 1-wire bus in combination with °CALEONbox.	Digital room temperature and humidity sensor with communication via 1-wire bus in combination with °CALEONbox.	Digital room temperature sensor with communication via 1-wire bus in combination with °CALEONbox.	Digital room temperature and humidity sensor with communication via 1-wire bus in combination with °CALEONbox.
→ Page 56	→ Page 56	→ Page 56	→ Page 56

Recommended Accessories

°CALEON Room Controller	°CALEON Clima Room Controller	Room Sensor 1-Wire	Room Sensor 1-Wire	CAN connection set
→ Page 20	→ Page 21	→ Page 56	→ Page 56	→ Page 53

°CALEON App

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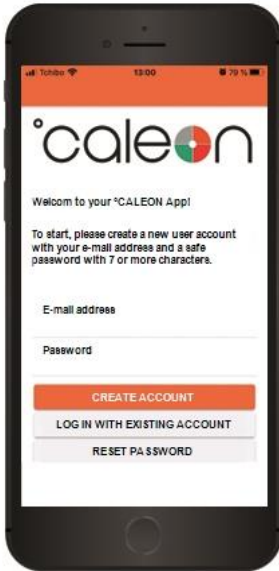
Simple setup via setup wizard

Temperatures and humidity in real time

Select operating mode and set target room temperature

Configure time program

Season switch heating/cooling

Activate holiday mode

Access to multiple systems

Service values

°CALEON App		
		Free

°CALEON Room Controller

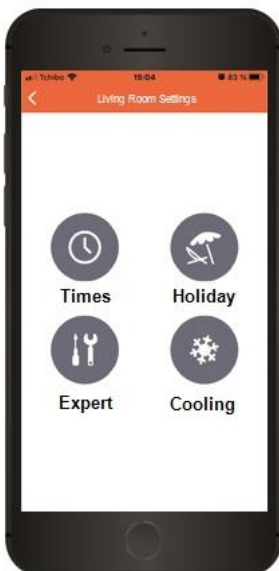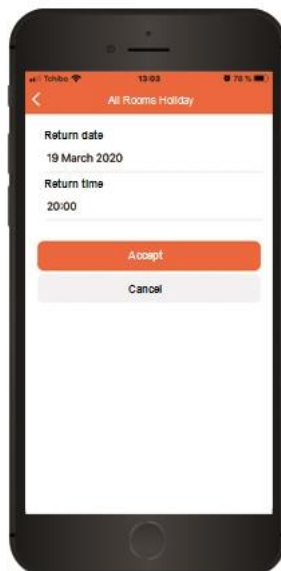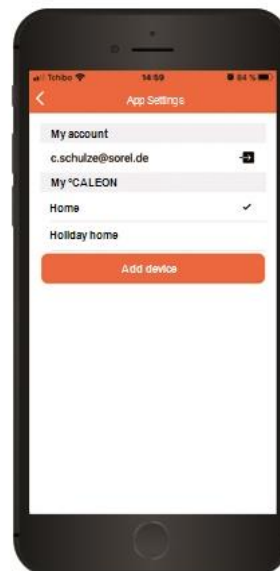With capacitive TFT touch display for comfortable remote control of the heating and cooling system from the living room. °CALEON Room Controllers influence the calculation of the flow temperature in the matching HCC controller or °CALEONbox, thus permitting an even faster and more precise temperature control.
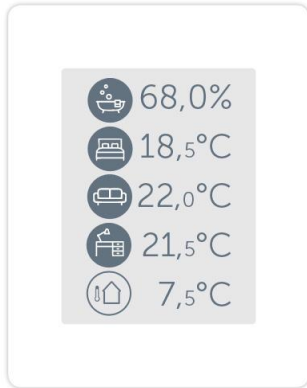
Room selection with several heating zones
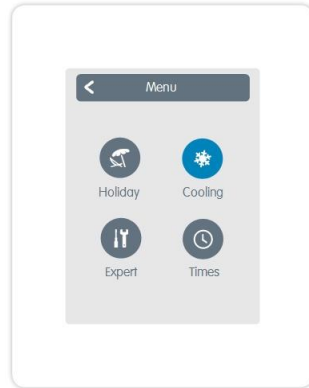
Season switch heating/cooling (Clima)
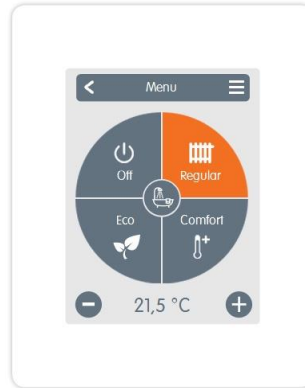
Adjust operating modes and feel-good temperature
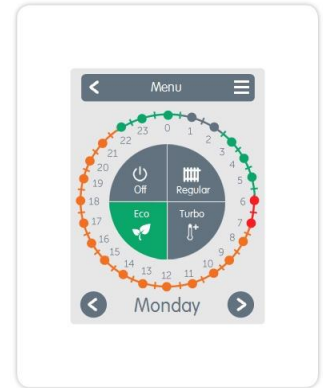
Intuitive time switch for weekly program

Application Examples

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

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

Zone control in a single-family house with energy request and season switch heating/cooling:
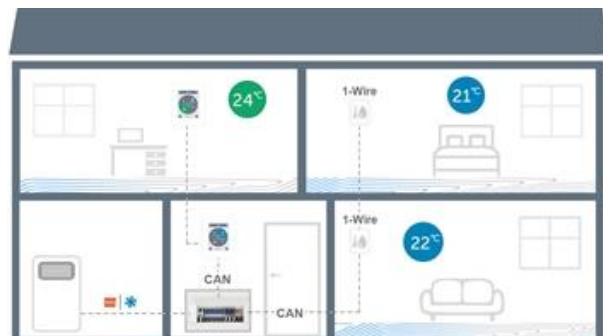
1x °CALEONbox Clima
2x °CALEON Clima Room Controller
1x Room Sensor 1-Wire per room

Weather-compensated heating circuit with room influence:
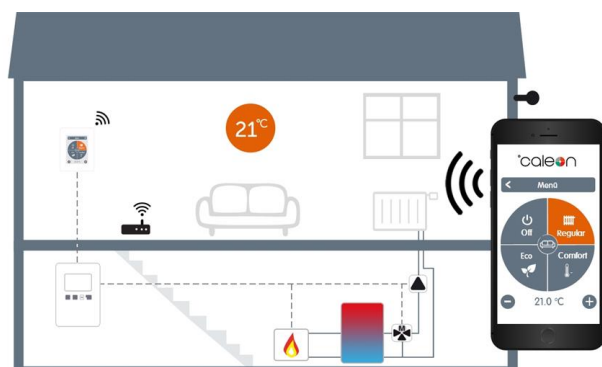
1x MHCC
1x °CALEON Smart Room Controller (WiFi)

Weather-compensated heating circuit for heating and cooling:

1x LHCC
1x °CALEON Smart Room Controller (WiFi)

Overview

	°CALEON Room Controller	°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 20	Page 20

	°CALEON Clima Room Controller	°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 👆
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 21	Page 21

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

19

°CALEON Room Controllers

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.
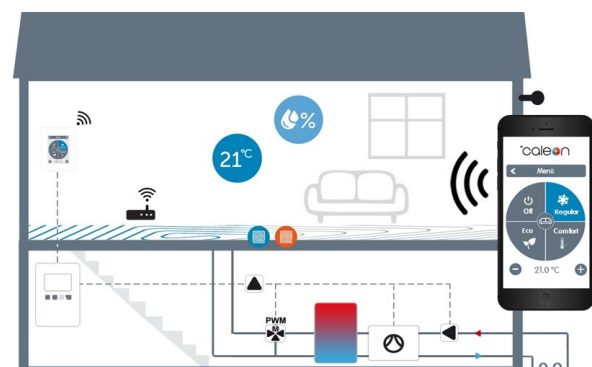
°CALEON Room Controller

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	°CALEON HCC °caleon box	

Art. No. 70001 - °CALEON Room Controller				
from quantity	1	10	20	40

°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	WLAN °CALEON HCC °caleon box °CALEON App	

Art. No. 70003 - °CALEON Smart Room Controller				
from quantity	1	10	20	40

Recommended Accessories

CAN Connection cable	HCCs	°CALEONbox	°CALEON App
→Page 53	→Page 4	→Page 14	→Page 17

°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

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

Inputs/ Outputs	Connectivity	Menu Languages
1x 🌡️ 2x 0-10V | PWM	°CALEON HCC °caleon box	🇩🇪 🇬🇧 🇫🇷 🇮🇹 🇪🇸 🇨🇿 🇬🇷 🇵🇱 🇳🇱 🇵🇹 🇨🇳

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	HCCs	°CALEONbox	°CALEON App
→ Page 53	→ Page 4	→ Page 14	→ Page 17

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

21

°CALEON Thermostats

Elegant 230V room thermostats with capacitive TFT touch display for comfortable remote control of heating and cooling systems from the living area. For °CALEON versions in combination with HCC controllers or °CALEONbox see °CALEON Room Controllers on page 19.

	°CALEON Thermostat	°CALEON Smart Thermostat
Room temperature 0...60°C, resolution 0.1°C	✔	✔
Relative humidity 0%-100%, resolution 0.1%	✔	✔
Heating operation	✔	✔
Cooling operation	✖	✖
Power supply	230VAC	230VAC
Switching output	230VAC or potential-free no SELV	230VAC or potential-free no SELV
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 27	RAL 9003 / 95 x 75 x 27
Product details	Page 23	Page 23

	°CALEON Clima Thermostat	°CALEON Clima Smart Thermostat
Room temperature 0...60°C, resolution 0.1°C	✔	✔
Relative humidity 0%-100%, resolution 0.1%	✔	✔
Heating operation	✔	✔
Cooling operation	✔👆	✔👆
Power supply	230VAC	230VAC
Switching output	2 relays 230VAC or potential-free no SELV👆	2 relays 230VAC or potential-free no SELV👆
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 27	RAL 9003 / 95 x 75 x 27
Product details	Page 24	Page 24

°CALEON Thermostats

Elegant 230V room thermostats with capacitive TFT touch display for comfortable remote control of heating systems from the living area.

°CALEON Thermostat

For convenient and intuitive control of the heating. The integrated relay switching contact makes it especially suitable for replacing existing room thermostats without SOREL heating controller, or in new buildings.

Inputs/Outputs		Menu Languages
1x 🏠	1x 230VAC or potential-free no SELV	🇩🇪 🇬🇧 🇫🇷 🇮🇹 🇪🇸 🇨🇿 🇬🇷 🇵🇱 🇳🇱 🇵🇹 🇨🇳

Art. No. 71001 - °CALEON Thermostat				
from quantity	1	10	20	40

°CALEON Smart Thermostat

With integrated module for WLAN network connection. The room thermostat can therefore be monitored and remote controlled by PC, tablet or smartphone from anywhere at any time.

Inputs/Outputs		Connectivity		Menu Languages
1x 🏠	1x 230VAC or potential-free no SELV	📶 WLAN	📱 °CALEON App	🇩🇪 🇬🇧 🇫🇷 🇮🇹 🇪🇸 🇨🇿 🇬🇷 🇵🇱 🇳🇱 🇵🇹 🇨🇳

Art. No. 71003 - °CALEON Smart Thermostat				
from quantity	1	10	20	40

Recommended Accessories

°CALEON Clima Thermostats

°CALEON App

°CALEON Clima Thermostats

Elegant 230V room thermostats with capacitive TFT touch display for comfortable remote and intuitive control of heating and cooling systems from the living area.

°CALEON Clima Thermostat

The integrated relay switching contact makes it especially suitable for replacing existing room thermostats without SOREL heating controller, or in new buildings.

Inputs/Outputs		Menu Languages
1x	2x 230VAC or potential-free no SELV	

Art. No. 71002 - °CALEON Clima Thermostat				
from quantity	1	10	20	40

°CALEON Clima Smart Thermostat

With integrated module for WLAN network connection. The room thermostat can therefore be monitored and remote controlled by PC, tablet or smartphone from anywhere at any time.

Inputs/Outputs		Connectivity		Menu Languages
1x	2x 230VAC or potential-free no SELV	WLAN	°CALEON App	

Art. No. 71004 - °CALEON Clima Smart Thermostat				
from quantity	1	10	20	40

Application Examples

Heat pump with heat/cooling request and season switch.
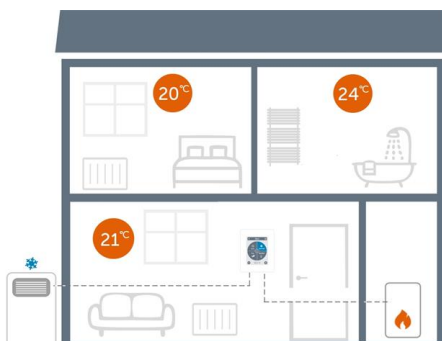
Heat pump with cooling request and heat request via burner.

Heat pump with heat/cooling request and dehumidifier.

Recommended Accessories

°CALEON Thermostats

→ Page 23

°CALEON App

→ Page 17

Fresh Water Controllers

The controllers of the FWC series for fresh water stations enable fast and precise regulation of the tap temperature.

New: optimized algorithm especially for fast load changes.

FWC	SFWC	MFWC	LFWC
Sensor inputs PT1000	2	6	6
Sensor inputs for Grundfos VVX / VFS / RPS sensor	1	2	2
Relay outputs 230V	1	3	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1	2	2
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 protecion via additional heating	✘	✔	✔
Setup wizard	✔	✔	✔
Solar-System protection	✘	✘	✔
Discharge protection	✔	✔	✔
Function control and error memory with date and time	✔	✔	✔
Menu blocker ü ü Power supply for universal	✔	✔	✔
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✘	✔	✔
Input for low energy tariff or PV overproduction (PV contact)	✘	✘	✘
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 26	Page 28	Page 29

We'll happily contribute with our 10+ years experience in developing fresh water systems, and support you in the initial adjustment of all control parameters to your stations - for quick and precise tapping temperatures in every common tapping situations.

SFWC - Small Fresh Water Controller

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

Inputs / Outputs	Menu Languages
2x Pt1000 · 1x 230 VAC 1x VVX/VFS/RPS · 1x 0-10V | PWM	🇩🇪 🇬🇧 🇪🇸 🇨🇿 🇵🇱 🇫🇷 🇮🇹 🇳🇱
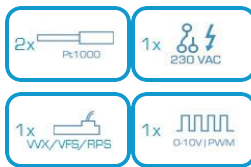
Hydraulic variants SFWC
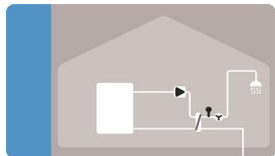
Basic scheme
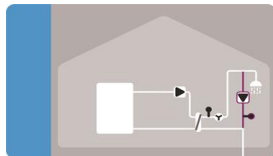
Additional function circulation

Recommended Accessories

VVX / VFS / RPS Combined sensor	Temperature sensors Pt1000	Immersion sleeves	Pre-wiring
→Page 59	→Page 55	→Page 58	→Page 65

List Prices

Note: Sales only to manufacturers of fresh water systems.

Art. No. 47001 - SFWC

SFWC for Heat Interface Units

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

SFWC for heat interface units

Inputs / Outputs		Menu Languages
3x Pt1000	1x 230 VAC	🇩🇪 🇬🇧
1x VVX/VFS/RPS	1x 0-10V|PWM	

SFWC (24VAC/DC) for heat interface units

Inputs / Outputs		Menu Languages
3x Pt1000	1x 230 VAC	🇩🇪 🇬🇧
1x VVX/VFS/RPS	2x 0-10V|PWM	
1x PWM	1x 24V	

Hydraulic variants SFWC for heat interface units
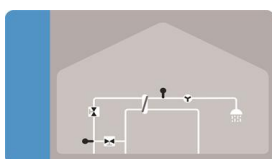
Valve for hot water standby and temperature and flow sensors

Recommended Accessories

VVX / VFS / RPS Combined sensor	Temperature sensors Pt1000	Immersion sleeves	Pre-wiring
→ Page 59	→ Page 55	→ Page 58	→ Page 65

List Prices

Note: Sales only to manufacturers of fresh water systems.

Art. No. 47021 - SFWC for heat interface units

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

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

27

MFWC - Medium Fresh Water Controller

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
6x Pt1000	Data logger	🇩🇪 🇬🇧 🇳🇱 🇮🇹 🇨🇿 🇫🇷
2x 230 VAC	FWC	🇵🇱 🇪🇸
2x VVX/VFS/RPS	HCC	
1x 230 VAC	TDC	
2x 0-10V | PWM		

Hydraulic variants MFWC

Basic scheme

Additional function circulation

Additional function Storage stratification
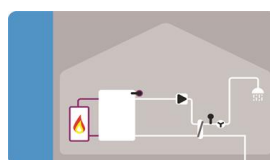
Additional function Storage heating
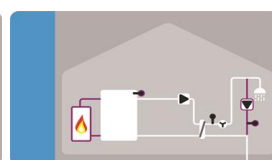
Additional function Storage heating and circulation
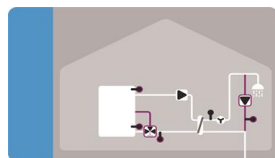
Additional function storage stratification and circulation
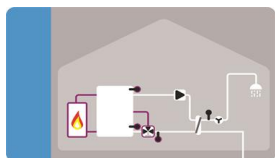
Additional function storage stratification and storage heating
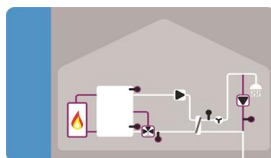
Additional function circulation, storage stratification and Storage heating
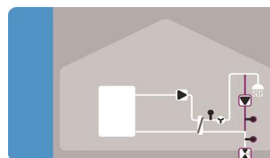
Additional function Cascade and circulation

Recommended Accessories

Data logger	VVX / VFS / RPS Combined sensor	Temperature sensors Pt1000	CAN Connection set
→Page 53	→Page 59	→Page 55	→Page 53

List Prices

Note: Sales only to manufacturers of fresh water systems.	Art. No. 47003 - MFWC

LFWC - Large Fresh Water Controller

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
6x Pt1000	Data logger	FWC
2x 230 VAC	HCC	
2x VVX/VFS/RPS	TDC	
1x 230 VAC		
2x 0-10V / PWM		

Hydraulic variants LFWC

Basic scheme

Additional function circulation

Additional function storage stratification

Additional function Storage heating

Additional function Storage heating and circulation

Additional function Storage stratification and circulation

Additional function Storage stratification and storage heating

Additional function circulation, storage stratification and Storage heating

Additional function cascade and circulation

Additional function primary premixer, circulation and storage stratification

Additional function circulation, Storagestratification, storage heating and additional pump

Additional function circulation, storage stratification, storage heating and solar

Recommended Accessories

Data logger	VVX / VFS / RPS Combined sensor	Temperature sensors Pt1000	CAN Connection set
→ Page 53	→ Page 59	→ Page 55	→ Page 53

List Prices

Note: Sales only to manufacturers of fresh water systems.

Art. No. 47005 - LFWC

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

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.

Recommended Accessories

CAN
Connection cable

→ Page 53

CAN
Connection box

→ Page 53

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

Inputs / Outputs
- 8x Pt1000
- 3x 230 VAC
- 1x VFS/RPS
- 1x 230 VAC
- 2x 0-10V | PWM
- 2x PWM

Connectivity
- °CALEON
- HCC
- °caleon box

Hydraulic variants HCC Fresh
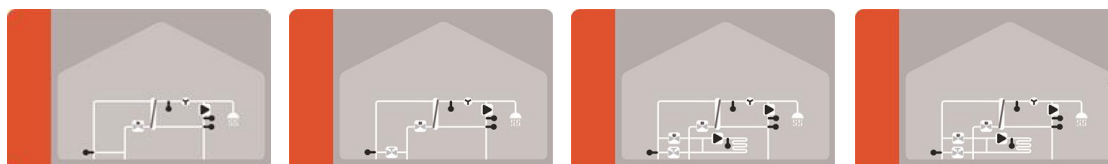
Recommended Accessories

°CALEON Room Controller	°CALEON Clima Room Controller	Data logger	CAN connection set	Temperature sensors Pt1000
→ Page 20	→ Page 21	→ Page 53	→ Page 53	→ Page 55

List Prices

Art. No. 27008 - HCC Fresh

from quantity	1	20	40	100

We'll happily contribute with our 10+ years experience in developing fresh water systems, and support you in the initial adjustment of all control parameters to your stations - for quick and precise tapping temperatures in every common tapping situations.

Temperature Difference 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.

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 protecion 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 ü ü Power supply for universal	✔	✔
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✖	✔
CAN bus connection for SOREL Connect	✖	✔
Data logging on microSD card	✖	via data logger
Ethernet connection	✖	via data logger
Dimensions Height x Width x Depth in mm	163 x 110 x 51	163 x 110 x 51
Housing colour	RAL 9003	RAL 9003
Protection Class	IP40	IP40
Mounting Hardware, Spare Fuse and User Manual	✔	✔
Product details	Page 34	Page 35

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	✗	✗
✓	✓	✓	✓
✓	✓	✓	✓
✗	✗	✗	✗
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✗	✗	✗
via data logger	✓	✗	✗
via data logger	✓ (only at V2)	✗	✗
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
✓	✓	✓	✓
Page 37	Page 39	Page 42	Page 43

STDC - Small Temperature Difference Controller

Single circuit controller for simple systems with 1 storage.

Inputs / Outputs	Menu Languages

3x Pt1000   1x 230 VAC   1x 0-10V I PWM

Hydraulic variants STDC
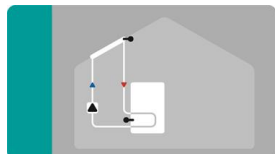
Solar with storage
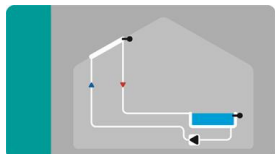
Solar with pool
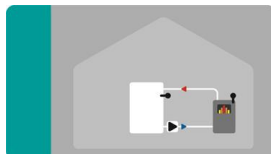
Solid fuil boiler with storage
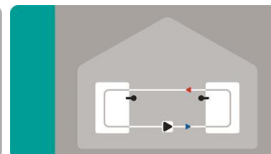
Storage transfer
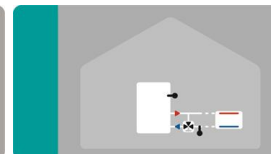
Return flow increase

Thermostat function

Universal DeltaT

ΔT
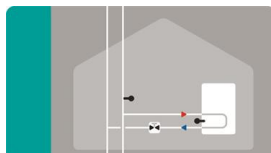
Shut-off valve
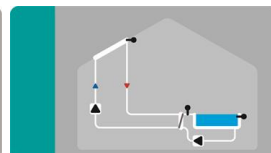
Solar with heat exchanger (sensor in the secondary circuit) and pool

Recommended Accessories

Temperature sensors Pt1000

Immersion sleeves

→ Page 55

→ Page 58

List Prices

Art. No. 10003 - STDC				
from quantity	1	10	20	40

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

Art. No. 10203 - STDC with 3 sensors TT/S2 PT1000				
from quantity	1	10	20	40

MTDC - Medium Temperature Difference Controller

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

Inputs / Outputs	Connectivity	Menu Languages
4x Pt1000 · 2x 230 VAC · 1x 0-10V I PWM	Datalogger · TDC · FWC · HCC	(flag icons)

Hydraulic variants MTDC - Includes STDC variants plus:

Solar with thermostat (additional heating)

Solar with 2 zones storage

Solar with heating circuit

Solar with bypass

Solar with heat exchanger

Solar with 2 collector surfaces

Solar with 2 collector surfaces and 2 pumps

Solar with 2 storages and 2 pumps

Solar with 2 storages and valve

Solar with heat exchanger

Solar with pool and heat exchanger

Solar with thermostat and valve

Solar with solid fuel boiler

Solar with cooling 1 (Coll. cooling)

Solar with cooling 2 (coll. cooling)

Solar with cooling 3 (storage cooling)

Recommended Accessories

Temperature sensors Pt1000

→ Page 55

Immersion sleeves

→ Page 58

Data logger

→ Page 53

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

35

Art. No. 16005 - MTDC				
from quantity	1	10	20	40

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

Art. No. 16305 - MTDC with 3 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:
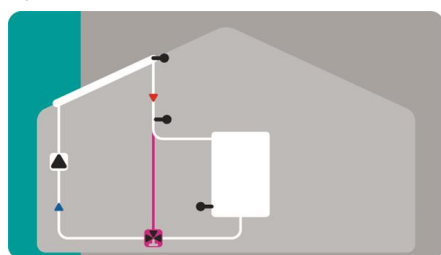
System 1 +

Solar with storage and additional solar bypass function

System 1 +
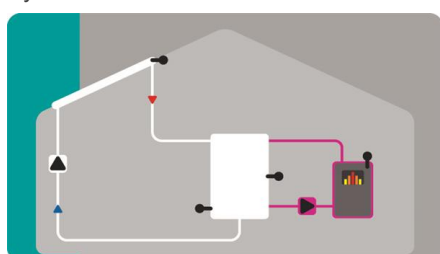
Solar with storage and additional function solid fuel boiler

System 1 +
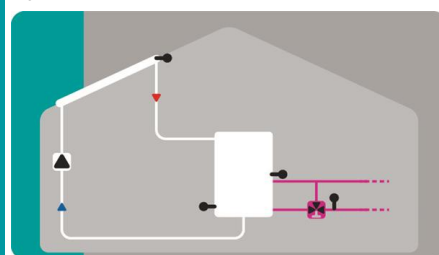
Solar with storage and additional return flow boosting function

Additional function easily adjusted:

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

1. Select free relay

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

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

3. Set function

LTDC - Large Temperature Difference Controller

Three-circuit controller for solar systems with 1-3 storage tanks and different heat sources.

Inputs / Outputs	Connectivity	Menu Languages
6x Pt1000	Datalogger	
2x 230 VAC	TDC	
2x VVX/VFS/RPS	HCC	
1x 230 VAC	FWC	
2x 0-10V / PWM		

Hydraulic variants LTDC - Includes all sTDC and MTDC variants plus:
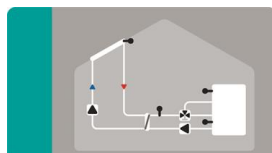
Solar with heat exchanger and valve

Solar with heat exchanger and 2 storages
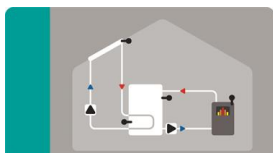
Solar with storage and solid-fuel boiler
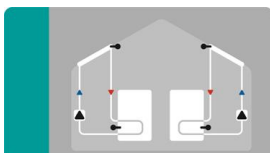
2x Solar
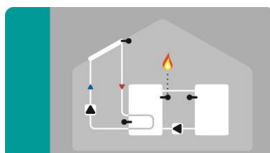
Solar with thermostat and Storage transfer
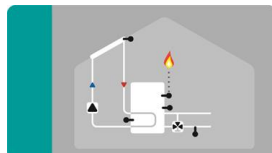
Solar with thermostat and return flow increase
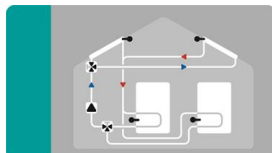
Solar with 2 collector surfaces, 2 storages and 2 valves
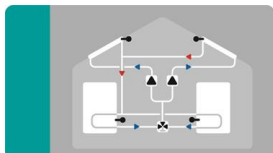
Solar with 2 collector surfaces, 2 storages and 2 pumps
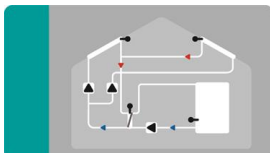
2 x Solar with storage, 2 pumps and heat exchanger
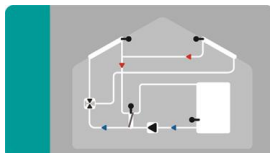
2 x Solar with storage, valve and heat exchanger
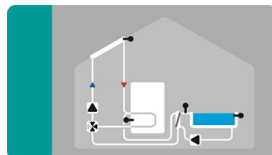
Solar with swimming pool, storage, heat exchanger and valve
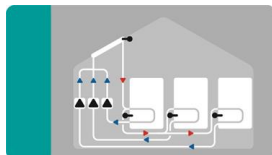
Solar with 3 storages and 3 pumps
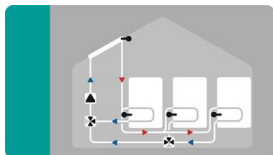
Solar with 3 storages and 3 pumps 2 valves
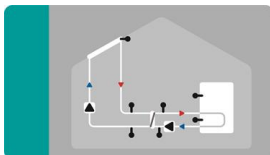
Solar, heat exchanger and storages for large systems
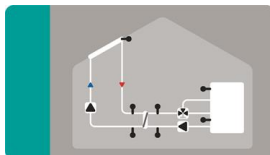
Solar with storage, heat exchanger and storages for large systems
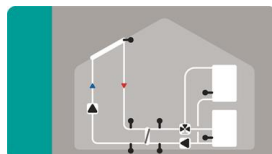
Solar, heat exchanger, zone valve and 2 storage tanks for large systems

Recommended Accessories

Temperature sensors / Immersion sleeves

→ Page 58

Data logger

→ Page 53

VVX / VFS / RPS Combined sensor

→ Page 59

Art. No. 17003 - LTDC				
from quantity	1	10	20	40

Art. No. 17303 - LTDC with 3 sensors TT/S2 PT1000				
from quantity	1	10	20	40

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

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

LTDC - Additional functions for free relays

- Solar bypass
- Backup heating control
- Cooling function
- Collector field cooling
- Return flow increase
- Anti-legionella function

- Storage transfer
- Universal DeltaT
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Booster for fast system loading

- Always on
- Pressure monitoring
- Parallel operating with R1
- Parallel operating with R2
- Thermostat 2
- Heat circuit

Example:

System 1 + ◎ + ⊠

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

System 2 + ⬙

Solar with heat exchanger with additional function Solid Fuel Boiler

System 10 + ♦

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

Additional function easily adjusted:

1. Select free relay

2. Select additional function

3. Set function

XTDC- XtraLarge Temperature Difference Controller

Multi-circuit controller for complex solar systems

Inputs / Outputs	Connectivity	Menu Languages

8x Pt1000   6x 230 VAC

2x VVX/VFS/RPS   2x 0-10V | PWM

1x RC20   1x Potential-free

Connectivity: Lan

Hydraulic variants XTDC

Solar with storage

Solar with heat exchanger

Solar with pool

Solar with pool and heat exchanger

Solar with 2 collector surfaces and 2 pumps

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

Solar with 2 collector, 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 3 storages and 3 pumps

Solar with 3 storages and 3 stop valves

Solar with 3 storages, 3 pumps and heat exchanger

Solar with 3 storages, 3 stop valves and heat exchanger

Solar with three-zone storage, 3 stop valves and heat exchanger

Solar with 2 storages, switching valves and swimming pool with heat exchanger
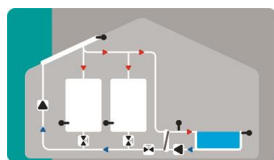
Solar with 2 storages, 3 stop valves and swimming pool with heat exchanger
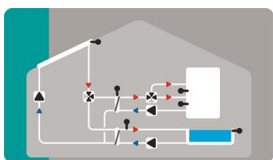
Solar with 2 storages, switching valve, heat exchanger and pool with heat exchanger
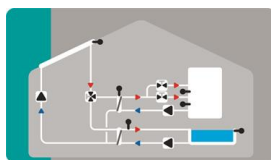
Solar with 2 two-zone storage, 2 stop valves, heat exchanger and pool with heat exchanger
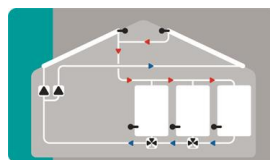
Solar with 2 collector surfaces and 3 storages with 2 switching valves
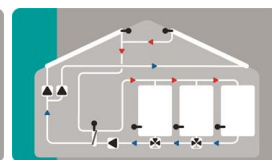
Solar with 2 collector surfaces, 3 storages with 2 switching valves and heat exchanger
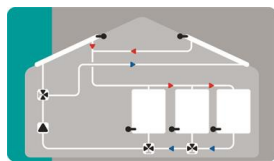
Solar with 2 collector surfaces with 1 valve, 1 pump, 3 storages with valves
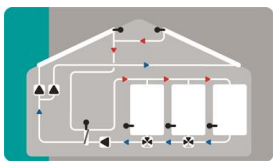
Solar with 2 collector surfaces with 2 pumps, 3 storages, heat exchanger and pump
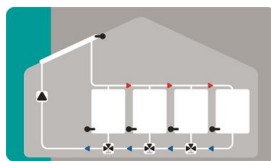
Solar with 4 storages and 3 valves
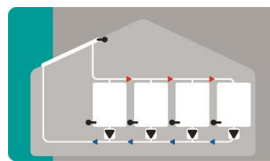
Solar with 4 storages and 4 pumps
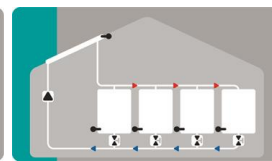
Solar with 4 storages and 4 stop valves
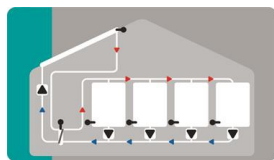
Solar with 4 storages, 4 pumps and heat exchanger
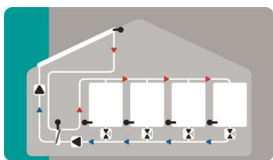
Solar with 4 storages, 4 stop valves and heat exchanger
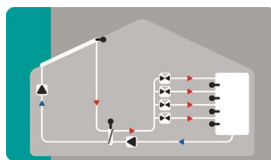
Solar with four-zone storage and 4 stop valves
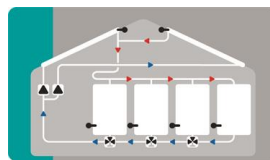
Solar with 2 collector surfaces, 4 storages, 2 pumps and 3 switching valves
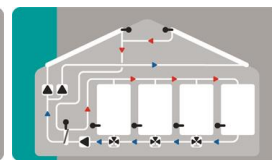
Solar with 2 collector surfaces, 4 storages, 2 pumps, 3 switching valves and heat exchanger
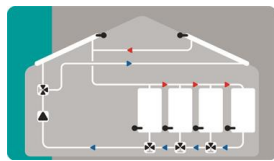
Solar with 2 collector surfaces, 4 storages and 3 switching valves
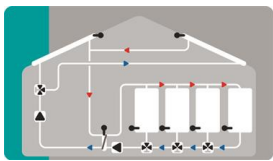
Solar with 2 collector surfaces, 4 storages and 3 switching valves and heat exchanger
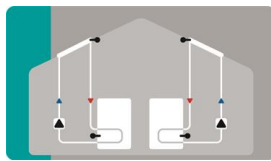
2 x Solar

Recommended Accessories

Temperature sensors Pt1000

→Page 55

System-Dependent Pre-Parametrisation

→Page 66

Immersion sleeves

→Page 58

VVX / VFS / RPS Combined sensor

→Page 59

List Prices

Art. No. 18001 - XTDC				
from quantity	1	10	20	40

Art. No. 18002 - XTDC with Ethernet incl. SOREL Connect				
from quantity	1	10	20	40

- 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
Edit special functions
1. Program selection
2. Speed control R1
4. Relay 3
5. Relay 4   Thermostat 2
6. Relay 5   Thermostat
7 Relau 6
▲   ▼   OK

1. Select free relay

6.4. Relay 3
7. 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

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

41

MTDC-E - Temperature Difference Controller

For basic solar systems with electric backup heating up to 3kW.
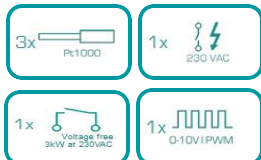
New: suitable for high-efficiency pumps and with additional hydraulic variant.
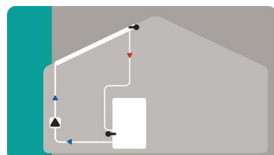
Inputs / Outputs	Menu Languages
3x Pt1000 / 1x 230 VAC	🇩🇪 🇬🇧 🇪🇸 🇵🇹 🇫🇷 🇮🇹 🇬🇷
1x Voltage free 3kW at 230VAC / 1x 0-10V I PWM	

Hydraulic variants MTDC-E

Solar with storage
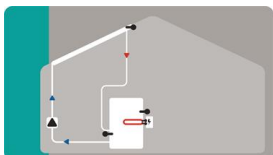
Solar, storage and electric heating rod
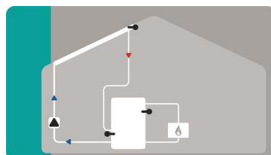
Solar, storage and gas boilers
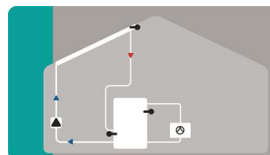
Solar, storage and Heat pump
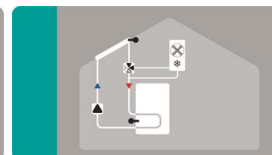
Solar with storage and Cooling

Recommended Accessories

Temperature sensors Pt1000
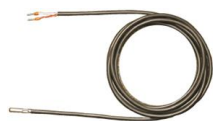
Immersion sleeves

→ Page 55

→ Page 58

List Prices

Art. No. 16006 - MTDC-E				
from quantity	1	10	20	40

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

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

LTDC-E - Temperature Difference Controller

For basic solar systems with electric backup heating up to 3kW and control of circulation pump.
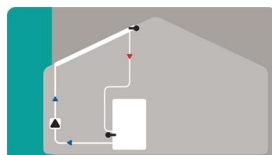
Inputs / Outputs	Menu Languages

4x Pt1000
2x 230 VAC
1x 0-10V l PWM
1x Voltage free 3kW at 230VAC

Hydraulic variants LTDC

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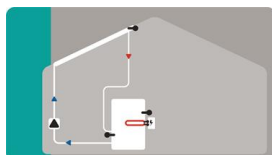
Solar, storage and electric heating rod
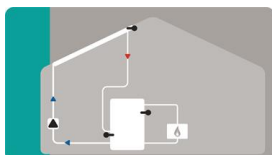
Solar, storage and gas boilers
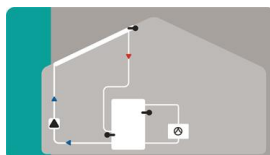
Solar, storage and Heat pump
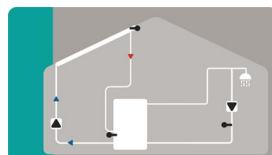
Solar, storage and circulation
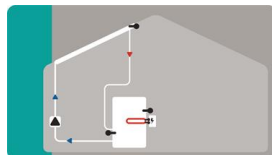
Solar with storage, immersion heater and circulation
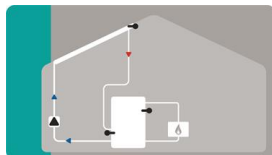
Solar with storage, gas boiler and circulation
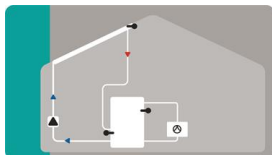
Solar with storage, heat pump and circulation

Recommended Accessories

Temperature sensors Pt1000

Immersion sleeves

External switching relay 4S 24A

→ Page 55

→ Page 58

→ Page 60

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

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 °C)

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

Art. No. 71111

S2-Solar-2

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

- High-efficiency pump WILO Yonos Para ST 25/6 iPWM
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar

- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Distance between supply and return 125 mm
- Working temperature 120 °C (short-term 160)

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

Art. No. 72211

S2-Solar-3 with vent pipe

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

- High-efficiency pump WILO Yonos Para ST 25/6 iPWM
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar

- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Distance between supply and return 125 mm
- Working temperature 120 °C (short-term 160)
- Vent pipe

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

Art. No. 72311

Auxiliary equipment for all Solar groups

Wall fixture for expansion tanks for all solar groups

Art. No. 77301

Stainless steel flex pipe 0,5m for expansion tank 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
- Temperature Difference Controller STDC plugwired and tested, including 2 sensor probes
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Working temperature 120 °C (short-term 160)

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

from quantity	1	5	10	20

S2-Solar-30

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

- High-efficiency solar pump WILO Yonos Para ST 25/6 iPWM or WILO Yonos Para ST 25/13 PWM
- Temperature Difference Controller MTDC or LTDC plugwired and tested 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 + MTDC
+ HE Pumpe WILO Yonos Para ST 25/6 iPWM

from quantity	1	5	10	20

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

from quantity	1	5	10	20

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

from quantity	1	5	10	20

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

from quantity	1	5	10	20

Pump groups of different manufacturers and previous versions with standard pumps are available on request.

DrainSet

DrainSet MTDC and DrainSet LTDC Completely pre-assembled, pre-wired and pre-configured drain-back station for self-draining solar systems. Consisting of the following components:

- Drain-Back Box with a volume up to 40l (depending on collector size 30-40m²)
- TDC controller incl. 3 Temperature sensors
- Safety valve 6 bar with pressure gauge
- Filling and flushing unit DN20 incl. connections and fi ll and drain valve
- Modular extension for big systems possible
- High efficiency solar pump (WILO Yonos Para ST 25 /13 PWM, height up to 13m)
- The height indications refer to water as the heat transfer medium. If glycol is used to fill the drain-back system, the delivery head of the pump is reduced by about 2-3 meters.

Art. No. 67165 - DrainSet MTDC				
from quantity	1	4	8	16
Art. No. 67173 - DrainSet LTDC				
from quantity	1	4	8	16

Operating Principle of Drain-back systems
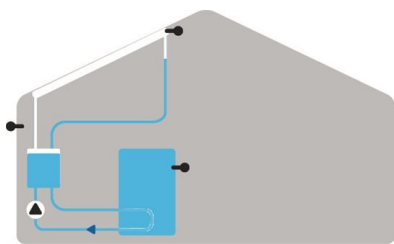
Idle mode of solar system
In idle mode, the
heat transfer medium is in the Drain-Back Box. The collectors are empty.
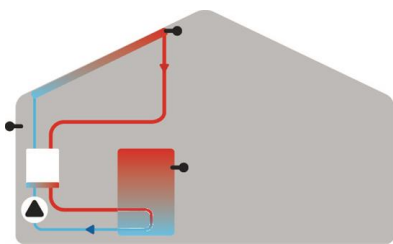
Solar system in operation
Under solar exposure, the system is set into operation by the TDC controller and the whole solar circuit / collectors are filled will maximum pump speed. Once in regular operation, the pump operates with reduced and continuously optimized speed to save energy.
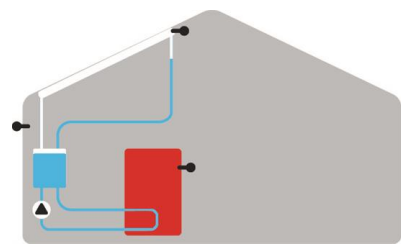
Storage fully loaded
When the storage is fully heated up or if the solar collectors are no longer warmer than the storage, the pump is automatically switched off. The heat transfer medium flows back from the collectors into the Drain-Box system without vaporizing. Therefore, any overheating of stagnant solar systems is effectively prevented.

Pool TDC M / M+ Pool Controllers

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

Inputs / Outputs	Menu Languages

3x Pt1000   2x 230 VAC

	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 ü ü Power supply for universal	✓	✓
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
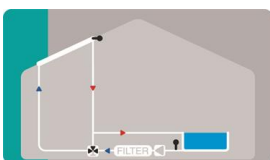
Pool with solar and ball valve
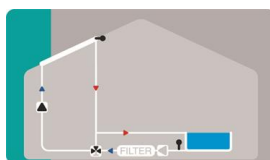
Pool with solar and additional pump
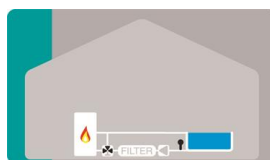
Pool with additional heating and ball valve

Hydraulic variants Pool TDC M+
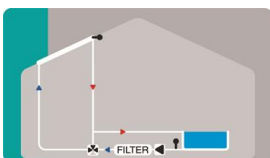
Pool with solar, ball valve and filter pump control
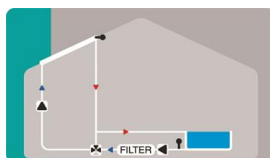
Pool with solar, additional pump and filter pump control
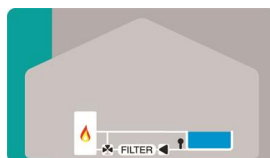
Pool with additional heating, ball valve and filter pump control

Pool with filter pump control

Recommended accessories & list prices

on request

SLC - Storage Loading Controller

For charging big domestic hot water storages with high temperature.

Inputs / Outputs	Connectivity	Menu Languages
6x Pt1000	Data logger	🇩🇪 🇬🇧 🇳🇱 🇮🇹
2x 230 VAC	FWC	
2x VVX/VFS/RPS	HCC	
2x 0-10V|PWM	TDC	
1x 230 VAC		

Hydraulic variants SLC
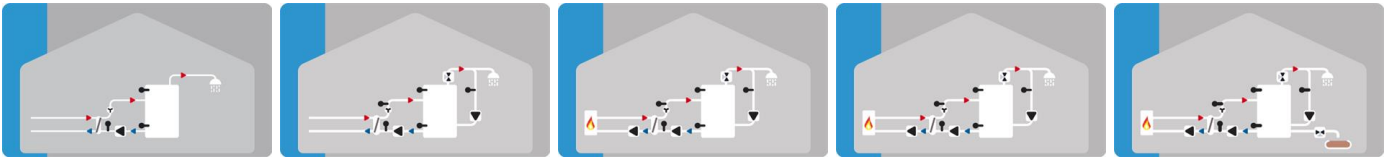
Recommended Accessories

Data logger

→ Page 53

VVX / VFS / RPS Combined sensor

→ Page 59

Temperature sensors Pt1000

→ Page 55

List Prices

Art. No. 47006 - SLC				
from quantity	1	5	10	20

TC -Thermostat Controller

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

Inputs / Outputs	Menu Languages
3x Pt1000 1x Voltage free 3kW at 230VAC	

Hydraulic variants TC

Temperature display

Thermostat S1
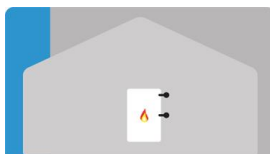
Thermostat S1 and S2
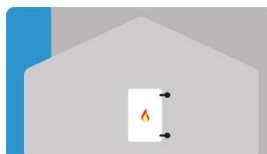
Thermostat S1 and S2

Thermosyphon

Recommended Accessories

Temperature sensors Pt1000

Immersion sleeves

External relay 4S

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

49

SBMC - Small Biomass Controller

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

Inputs / Outputs

3x Pt1000

1x 230 VAC

1x 0-10V | PWM
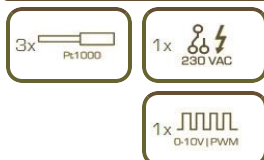
Menu Languages

Technical Data

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

Hydraulic variants SBMC
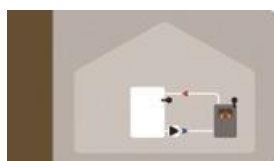
Recommended Accessories

Temperature sensors Pt1000

→ Page 55

Immersion sleeves

→ Page 58

List Prices

Art. No. 10008 - SBMC				
from quantity	1	10	20	40

Art. No. 10208 - SBMC Set with 2 sensors TT/S2 PT1000				
from quantity	1	10	20	40

Art. No. 10308 - SBMC Set with 3 sensors TT/S2 PT1000				
from quantity	1	10	20	40

WPC5 - Heat Pump Controller

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

Inputs / Outputs	Menu Languages
6x Pt1000	4x 230 VAC
1x Potential-free	
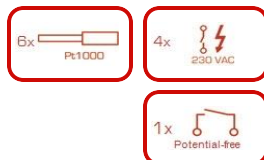
Further heat pump applications with additional functions such as heating and cooling, second heat source and more see also: LHCC page **7**, XHCC page **9**.

WPC5
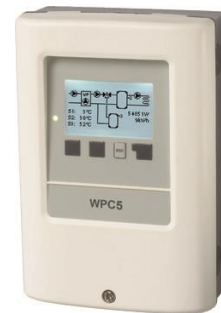
Technical Data	
LEDs red/green for display of operating status	✓
Battery-backed Real Time Clock > 24h	✓
Setup wizard	✓
Statistics and graphic analysis of data memory	✓
Seizing Protection	✓
Anti-freeze protection	✓
Function control and error memory with date and time	✓
Menu blocker ü ü Power supply for universal	✓
Dimensions Height x Width x Depth in mm	163mm x 110mm x 51mm
Protection Class	IP40

Hydraulic variants WPC
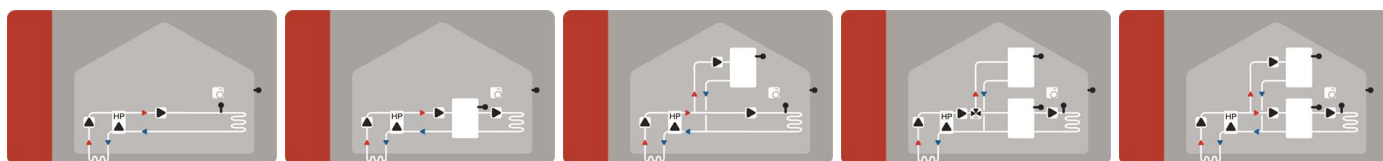
Recommended Accessories

Temperature sensors Pt1000
→ Page 55

Immersion sleeves
→ Page 58

List Prices

Art. No. 35000 - WPC 5				
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 GmbH, Reme-Straße 12, 58300 Wetter, T +49 2335 682 77 0, F +49 2335 682 77 10, www.sorel.de, info@sorel.de

51

SOREL Connect - Monitoring and Analysis

SOREL Connect Controllers and °CALEON Room Contollers 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 local networks or the Internet 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. 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.
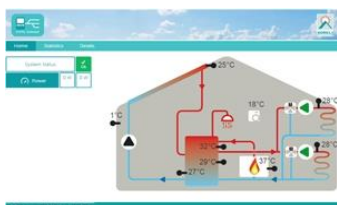
System overview
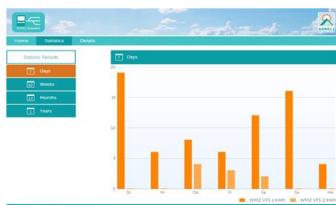
Energy statistics

Temperature curves (only HCC)
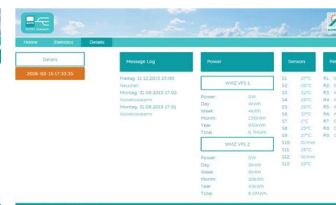
Technical details for the expert

Network Principle

Application example: XHCC with direct Ethernet connection

Application example: MHCC with Ethernet connection via data logger
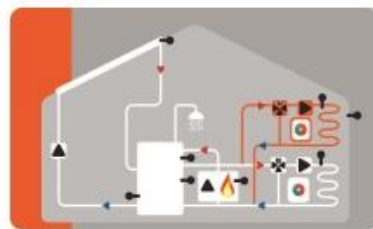
Application example: additional mixed heating circuit and 2 °CALEON Room Controllers
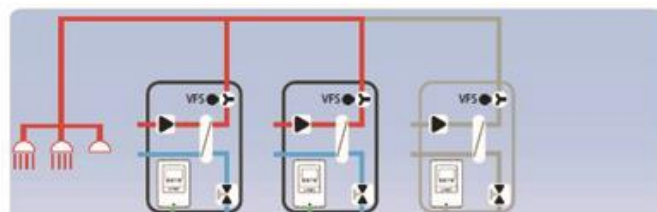
Application example: fresh water cascade

Data logger

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

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

CAN connection box

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

CAN connection set

CAN connection set for connecting multiple controllers	
Art. no. 89210	CAN connection set 0.3m shielded twisted pair CAN connection cable 1x2x0.22mm with 2 Molex plugs, 2 terminating resistors with Molex plugs for end devices
Art. no. 89211	CAN connection set 1.00m shielded twisted pair CAN connection cable 1 x 2 x 0.22 mm with 2 Molex plugs, 2 terminating resistors with Molex plugs for end devices
Art. no. 89213	CAN connection set 2.90m shielded twisted pair CAN connection cable 1 x 2 x 0.22 mm with 2 Molex plugs, 2 terminating resistors with Molex plugs for end devices
Art. no. 89299	CAN connect set 6-wire by the metre shielded twisted pair CAN connection cable 3 x 2 x 0.22 mm cable length selectable from 1 to 100m. Price per meter.
Art. no. 89220	CAN adapter including CAN cable 50m with Molex plugs and 2 clamp terminals

Room Temperature Sensors

RC20

Optional for MHCC, LHCC and XHCC Room thermostat sensor.

Art. No. 89020 - RC20 Room temperature sensor				
from quantity	1	5	10	20
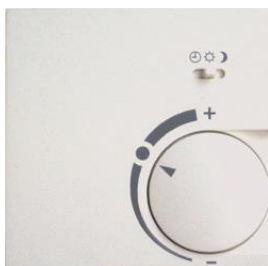
RC21

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

Art. No. 89021 - RC21 Room temperature sensor and remote adjuster				
from quantity	1	5	10	20

Actuators

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

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

Actuator ARA661
Art. No. 76901

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

Actuator ARA598 PWM 12-24VDC 5W
Art. No. 76900

0-10V I PWM

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℃				
from quantity	1	20	50	100

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

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

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

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

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

Art. no. 82220 - TF/S2 Temperature flat contact sensor with 2 m silicone cable, 180℃				
from quantity	1	20	50	100

Art. No. 83140 - TD/P4 Temperature tertiary sensor with 4 m PVC cable, 95℃				
from quantity	1	20	50	100

Art. No. 85256 - TT/S5 TP6 Temperature immersion sensor with 5 m silicone cable for swimming pool applications				
from quantity	1	20	50	100

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

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

TA55 Temperature external sensor box

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

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

55

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

Room Sensor 1-Wire (55 mm UP / in-wall)

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

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

Art. No. 80003 - Room Sensor 1-Wire (55 mm UP / in-wall)				
from quantity	1	10	20	40

Room Sensor Clima 1-Wire (55 mm UP / in-wall)

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

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

Art. No. 80004 - Room Sensor Clima 1-Wire (55 mm UP / in-wall)				
from quantity	1	10	20	40

Room Sensor 1-Wire

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

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

Art. No. 80001 - Room Sensor 1-Wire				
from quantity	1	10	20	40

Room Sensor Clima 1-Wire

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

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

Art. No. 80002 - Room Sensor Clima 1-Wire				
from quantity	1	10	20	40

Other 1-Wire Sensors

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

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

57

Immersion sleeves

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

Art. no. 91030 - TH30 with 30mm brass immersion pipe, 150°C					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. 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. 90150 - TH150 w/ nickel-plated 150mm copper imm. pipe, 150/180 °C					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 - TH100E stainl. steel imm. sleeve 100mm, test prod up to 300°C					Art. No. 92150 - TH150E stainl. 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 - TH200E stainl. steel imm. sleeve 200mm, test prod up to 300°C				
from quantity	1	20	50	100

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

Available in 1,2-12 l/min, 2-40 l/min, 5-100 l/min, 10-200 l/min, 20-400 l/min in stainless steel tube

VFS 1-12L/Min 0-100°C, 3/4"AG, stainless steel
Art. No. 78012

VFS 2-40L/Min 0-100°C, 3/4"AG, stainless steel
Art. No. 78040

VFS 5-100L/Min 0-100°C, 1", stainless steel
Art. No. 78100

VFS 10-200L/Min 0-100°C, 1 1/4" stainless steel
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

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

59

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 4S x 24A

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

100 pieces fuse 2A isolated, slow blow, boxed

Art. No. 02125 - 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

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

61

OEM

Special net prices, no discounts

Customization S-Controller

Text | Logo

Company logo in display at startup	
One off cost	
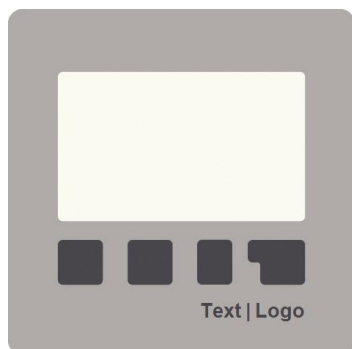
STDC front label, plastic, up to 4 colours	
€/per piece	
Minimum order quantity	1.000 front labels
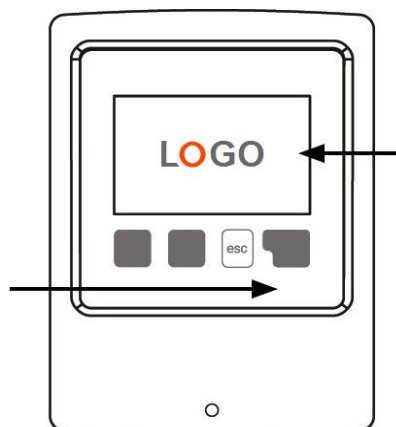
Customization M-, L and X-Controller

Company logo in display at startup	
One off cost	
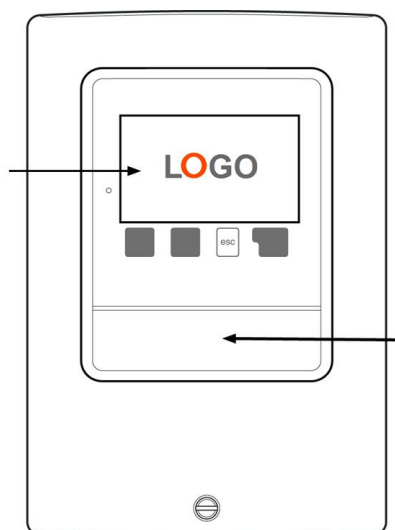
Text | Logo

TDC/HCC.. front label, paper paper-strip 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

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

°caleon

Company logo in display at startup and befor standby

One off cost	
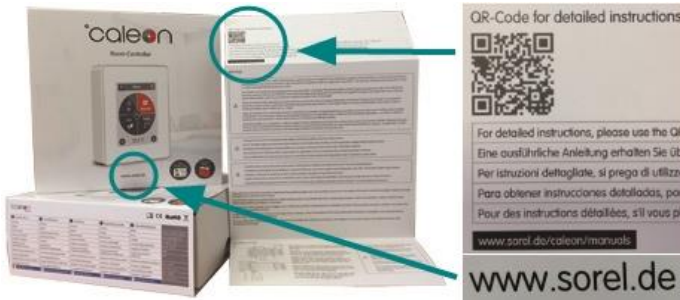
Cardboard sleeve and manual for °CALEON

€/per piece	
Minimum order quantity	500

Customized app

Customization °CALEON app
customize color, font, icons and functions.

	on request

Customized app with custom functionality

	on request

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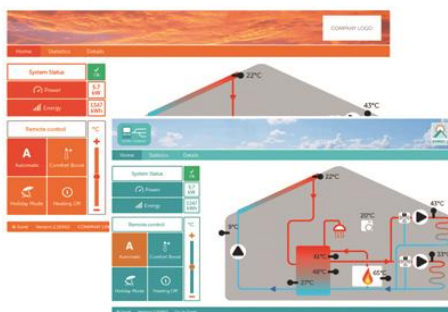
Art. No. Art. no. 77770 SOREL Connect Page - Adaption of header (graphics, logo), sidebar (colour, text) and footer (text, link and colour)

One off cost	

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

63

Customized barcode and type decals (Dimensions 70 x 22 mm)		Additional manual (e.g. other languages)	
		€/per piece	

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

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

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!

Conceptual Design → Hardware Development / Software Development → Prototyping → Certification → Series

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

Please contact us: oem@sorel.de

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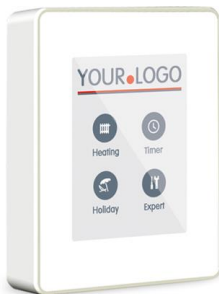
Based on our classy control panel with capacitive TFT touch display and elegant glass cover, we are pleased to develop an individual product for your application together. Using the existing hardware, operating system and various software modules is the smartest way towards your specific solution with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

Application Examples

Ventilation Control (2.8")

Wood-Burning Stove Control (2.8")

Universal Timer (2.8")

Smart Thermostat (2.8")

Heat Pump Control (3.5")

Energy Manager (3.5")
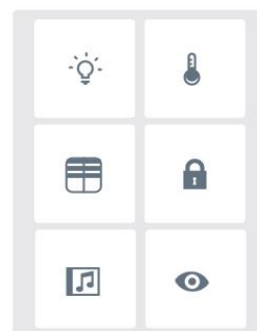
Smart Home Central Unit (3.5")

System Controller for Boiler Panels (4.3")

Hardware Options
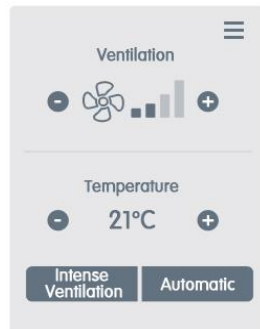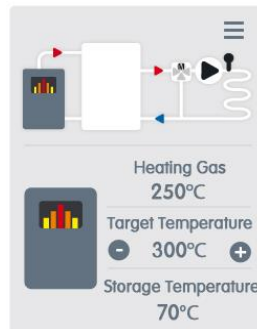
WLAN

2x 0-10V|PWM

CAN bus
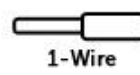
1-Wire

Potential-free

Please contact us: oem@sorel.de

Pre-wiring

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

Please contact us: oem@sorel.de

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

65

System-Dependent Pre-Parametrisation

1. Send hydraulic plan with
short description
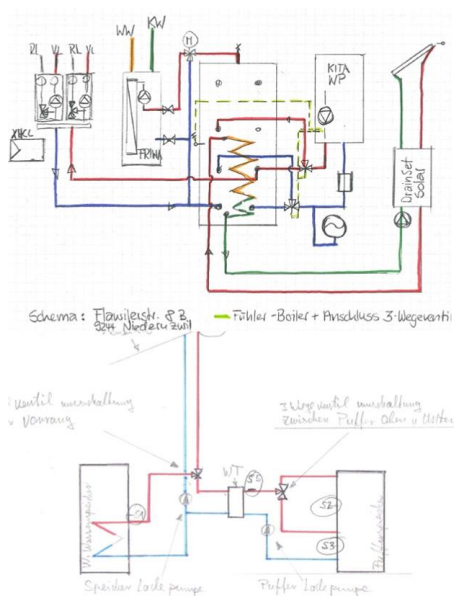
2. Receive preset controller with clamp
connection plan
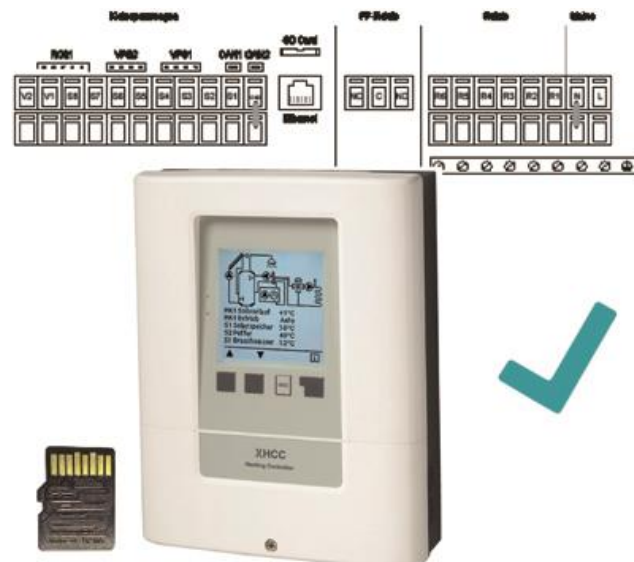
> Manual presetting of the controller adapted to the system of the customer. The price includes a simple sheet with allocation of the appliances like pumps and valves and the Temperature sensors.

Art. No. 06899	

PC-Simulation

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

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.

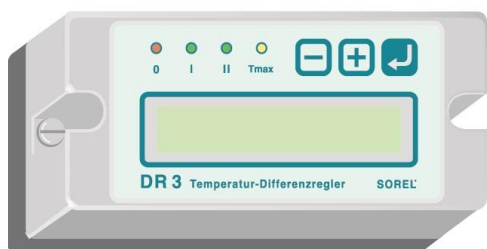| Previous model	Recommended Controller
TDC 1	MTDC
TDC 2	MTDC
TDC 3	MTDC
TDC 4 without VFS	MTDC/LTDC
TDC 4 with VFS	LTDC
TDC 5	LTDC
SD 01	STDC
SD 01/f	SBMC
DR 01	STDC
DR 01F	SBMC
DR 1	STDC
DR 1S	STDC
DR 1F	SBMC
DR 2	MTDC
DR 3	MTDC
DR 4	MTDC/LTDC
DR 5	LTDC
HR3	MHCC
HCC3	MHCC
HCC4/HCC5/HCC6	LHCC
MR...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

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

67

SOREL GmbH Mikroelektronik
Reme-Straße 12
58300 Wetter (Ruhr)
Germany
Telefon: +49 2335 682 77 0
Telefax: +49 2335 682 77 10
E-Mail: info@sorel.de
Web: www.sorel.de

Sparkasse Sprockhövel
BLZ 452 515 15
Konto 10991
Swift/BIC-Code SPSHDE 31 XXX
IBAN-Code DE 2545 2515 15 00000 10991
Amtsgericht Hagen
HRB 10189
USt-Id-Nr. DE 125 315 635

Management
Georg Bicher
Jonas Bicher

Technical Director
Christian Zänker
Telefon: +49 2335 682 77 23
E-Mail: c.zaenker@sorel.de

Order Management
Heike Hoffmann-Jelinski, Martin Michalski,
Radegundis Albus, Silke Tombrink
Telefon: +49 2335 682 77 0
Telefax: +49 2335 682 77 10
E-Mail: auftrag@sorel.de

Technical Support
Kevin Schimnick
E-Mail: support@sorel.de

Documentation & Design
Christiane Schulze
Telefon: +49 2335 682 77 13
E-Mail: c.schulze@sorel.de

Wetter (Ruhr)

Follow us on Facebook
facebook.com/sorel.de

Visit us on YouTube
sorel.de/youtube

SGS
SYSTEM CERTIFICATION
ISO 9001
TüV SAAR

General notes:
This price list is valid as of May 1st, 2020. Supersedes any previously issued price list(s). SOREL GmbH Mikroelektronik (SOREL) reserves the right to change specifications and pricing without notice. Any errors or omissions within this document are unintentional and may be subject to revision at any time by SOREL. 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 ander any circumstances. Je nach Anwendungsfall sind weitere Anlagen- und Sicherheitskomponeten wie Sperrventile, Rückschlagklappen, Sicherheitstemperaturbegrenzer, Verbrühungsschutz usw. vorgeschrieben und somit vorzusehen.
Die genannten Preise verstehen sich pro Stück ab Werk (EXW lt. Incoterms) Wetter (Ruhr) zzgl. Mehrwertsteuer. 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.