

Temperature Difference Controllers

LTDC

Large Temperature Difference Controller
VFS and RPS flow and pressure monitoring
Remote Control and Data Logging via external data logger

Features

- For 36 basic systems with solar or solid fuel boiler with additional functions for unused relays
- 2 In / Out Connectors for SOREL Connect data logger and ethernet bridge.
- Intuitive operator guidance via 4 input keys
- Full text and graphical display with animations
- High-contrast lighted display with 128x64 dots with >24h power reserve
- White housing RAL9003, protection class IP40 Dimensions H163x110x51mm
- Mounting hardware, spare fuse and user manual

Menu languages (additional languages on request)



LTDC

Version 1 Version 2 Version 3 Version 4

	Version 1	Version 2	Version 3	Version 4
Sensor inputs	5	5	6	6
Relay outputs 230V	3	3	3	3
of which for speed control of standard pumps	0	2	0	2
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1	1	2	2
Number of applications	36+	36+	36+	36+
LEDs red/green for display of operating status	✓	✓	✓	✓
Simple heat metering	✓	✓	✓	✓
Flow based heat metering (Grundfos VFS sensor)	✗	✗	(0-2)	(0-2)
Pressure monitoring (Grundfos RPS sensor)	✗	✗	(0-2)	(0-2)
Time and temperature-controlled thermostat function	✓	✓	✓	✓
Battery-backed Real Time Clock	✓	✓	✓	✓
Legionella protection via solar	✓	✓	✓	✓
Legionella protection via additional heating	✓	✓	✓	✓
Cooling function	✓	✓	✓	✓
Setup wizard	✓	✓	✓	✓
System protection	✓	✓	✓	✓
Collector protection	✓	✓	✓	✓
Storage protection	✓	✓	✓	✓
Anti-freeze programs	✓	✓	✓	✓
Recooling	✓	✓	✓	✓

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Start logic for vacuum tube collectors	✓	✓	✓	✓
Control program for self-dumping systems (drain-back)	✓	✓	✓	✓
Data storage with statistics and graphic analysis	✓	✓	✓	✓
Error memory and analysis with date and time	✓	✓	✓	✓
Menu blocker	✓	✓	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓	✓	✓	✓
CAN bus connection for SOREL Connect	✓	✓	✓	✓
CAN bus connection for data logger	✓	✓	✓	✓

- Version 1**
- Art. no. 17001 - LTDC V1
 - Art. no. 17301 - LTDC V1 with 3 sensors TT/S2 PT1000
 - Art. no. 17401 - LTDC V1 with 4 sensors TT/S2 PT1000
 - Art. no. 17501 - LTDC V1 with 5 sensors TT/S2 PT1000

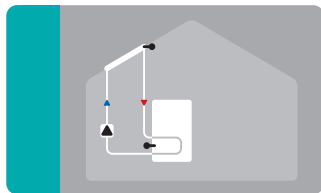
- Version 2**
- Art. no. 17002 - LTDC V2
 - Art. no. 17302 - LTDC V2 with 3 sensors TT/S2 PT1000
 - Art. no. 17402 - LTDC V2 with 4 sensors TT/S2 PT1000
 - Art. no. 17502 - LTDC V2 with 5 sensors TT/S2 PT1000

- Version 3**
- Art. no. 17003 - LTDC V3
 - Art. no. 17303 - LTDC V3 with 3 sensors TT/S2 PT1000
 - Art. no. 17403 - LTDC V3 with 4 sensors TT/S2 PT1000
 - Art. no. 17503 - LTDC V3 with 5 sensors TT/S2 PT1000

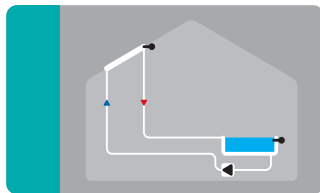
- Version 4**
- Art. no. 17004 - LTDC V4
 - Art. no. 17304 - LTDC V4 with 3 sensors TT/S2 PT1000
 - Art. no. 17404 - LTDC V4 with 4 sensors TT/S2 PT1000
 - Art. no. 17504 - LTDC V4 with 5 sensors TT/S2 PT1000

Temperature Difference Controllers

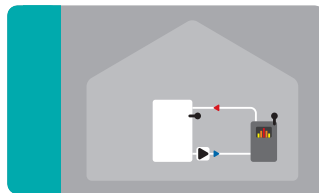
Hydraulic variants LTDC



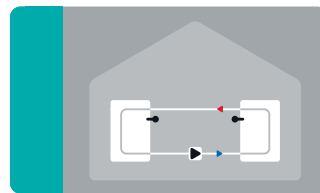
Solar with storage



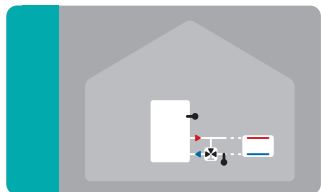
Solar with swimming pool



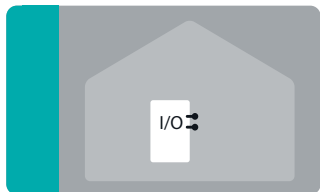
Solid fuel boiler with storage



Storage transfer



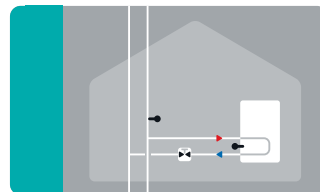
Return flow increase



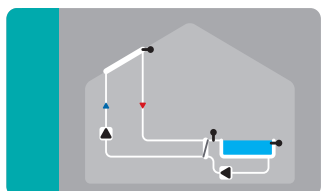
Thermostat function



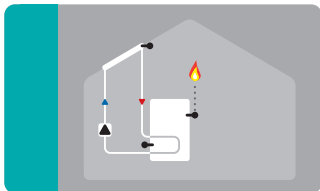
Universal DeltaT



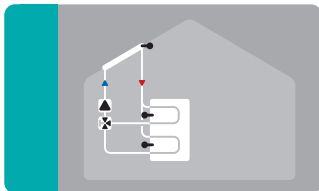
Stop valve



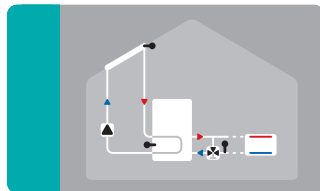
Solar with heat exchanger (sensor in secondary circuit) and pool



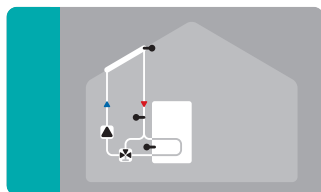
Solar with thermostat (auxiliary heating)



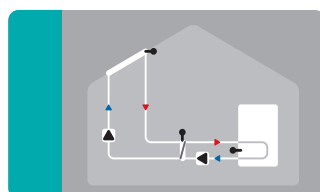
Solar with two-zone storage



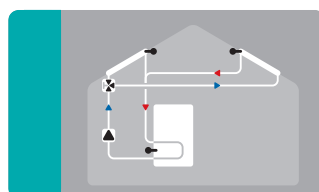
Solar with heating circuit



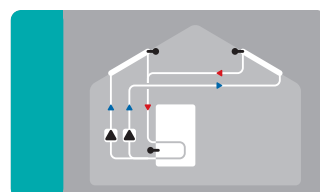
Solar with bypass



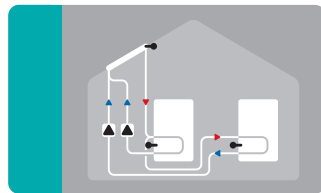
Solar with heat exchanger



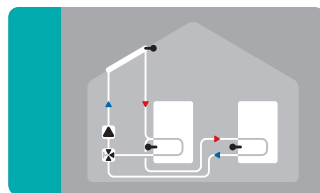
Solar with 2 collector surfaces



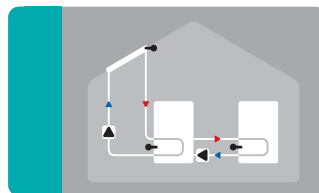
Solar with 2 collector surfaces and 2 pumps



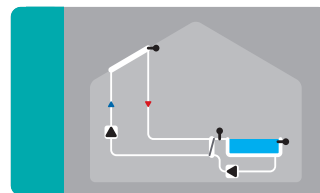
Solar with 2 storages and 2 pumps



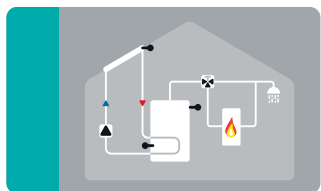
Solar with 2 storages and valve



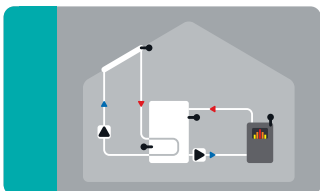
Solar with storage transfer



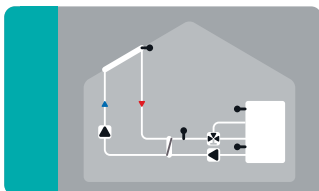
Solar with pool and heat exchanger



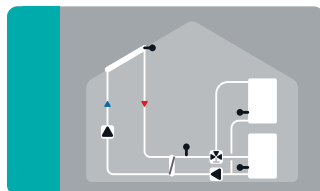
Solar with thermostat and valve



Solar with solid-fuel boiler



Solar with cooling 1 (collector cooling)



Solar with cooling 2 (collector cooling)

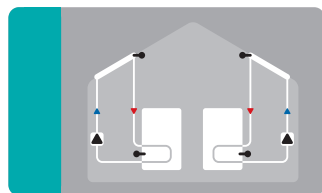
The illustrations should be viewed only as schematic diagrams showing the respective hydraulic systems, and do not claim to be complete. The controller does not replace safety devices under any circumstances. Depending on the specific application, additional system components and safety components may be mandatory, such as check valves, non-return valves, safety temperature limiters, scalding protectors, etc., and must therefore be provided.

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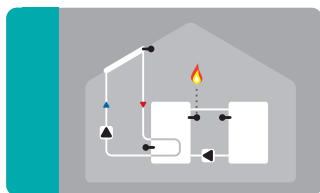
Temperature Difference Controllers



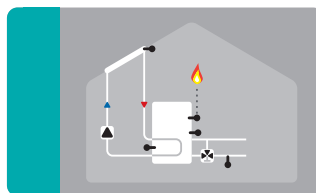
Hydraulic variants LTDC



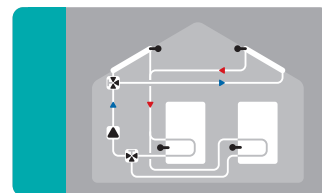
2x Solar



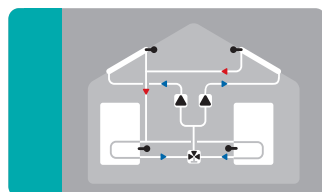
Solar with thermostat and storage transfer



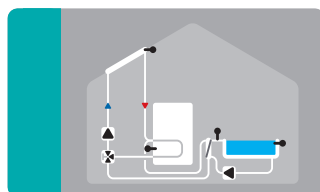
Solar with thermostat and return flow increase



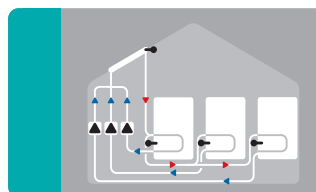
Solar with 2 collector surfaces, 2 storages and 2 valves



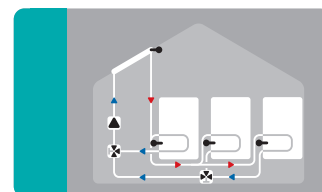
Solar with 2 collector surfaces, 2 storages and 2 pumps



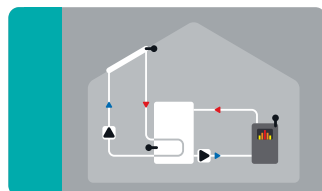
Solar with swimming pool, storage, heat exchanger and valve



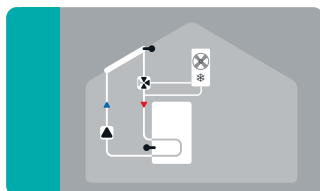
Solar with 3 storages and 3 pumps



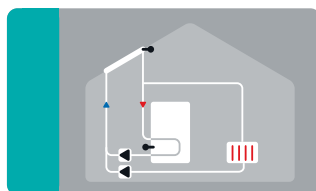
Solar with 3 storages and 2 valves



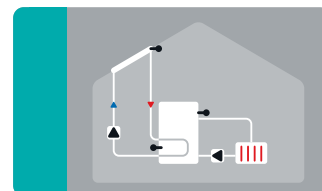
Solar with solid-fuel boiler



Solar with cooling 1 (collector cooling)



Solar with cooling 2 (collector cooling)



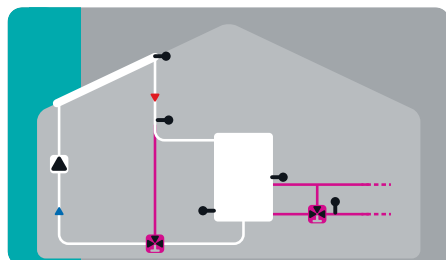
Solar with cooling 3 (storage cooling)

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
- Always on
- Thermostat 2
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Pressure monitoring
- Booster for fast system loading
- Heating Circuit
- Parallel operating with R1
- Parallel operating with R2

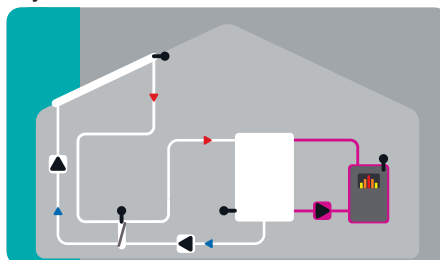
Example:

System 1 + +



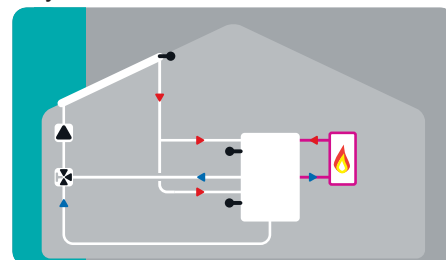
Solar with storage with additional functions
Solar Bypass and Return Flow Increase

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

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