

crystal clear operator guidance



Temperature Difference Controller  
TDC for solar thermal energy

# Temperature Difference Controller TDC

## General information

As a leading manufacturer of solar and heating controllers, we have enhanced our range of easy-to-use controllers.

Incorporating practicality and design, the series of Temperature Difference Controllers feature crystal clear operator guidance in a variety of languages.

Depending on the application and the required functions different types of controllers are available:

- . 2-6 Pt1000 temperature probes
- . 1-3 relay outputs
- . Pump output with speed control with electronic for smooth engine running
- . Heat quantity count with and without VFS direct sensor
- . Options for enhancement

A clearly written, easy to read, lighted display with comprehensive full text and graphic mode is used without any confusing abbreviations.

The self-explanatory operation with 4 input keys allows the clear assignment of different functions. The instructions are entered with the keys as text or symbols.

The housing (H=163mm W=110mm D=51mm) offers different options of assembly such as wall assembly, integration to a pump group or mounting to a switch panel.

The electrical equipment is located in the upper part of the housing, it is plugged on and can be easily separated.

The terminal clamps are firmly integrated into the lower part of the housing. All cables can be provided with strain relieve in the clamp room.



According to the type of device, different options for enhancement are provided.

- . Ethernet interface for remote administration and data logging
- . 0...10V or 4...20mA interface for heat requirement
- . PWM output for e.g. high efficiency pump
- . Additional relay for alarm notification

Further types of controllers for heat circuit, heat pumps and solid fuel boilers are available.

The devices are available in custom-made type and in different languages. Label, manual, software and hardware are customized for OEM clients.

## STDC - „small TDC“

The new STDC: Compact, effective, easy to handle

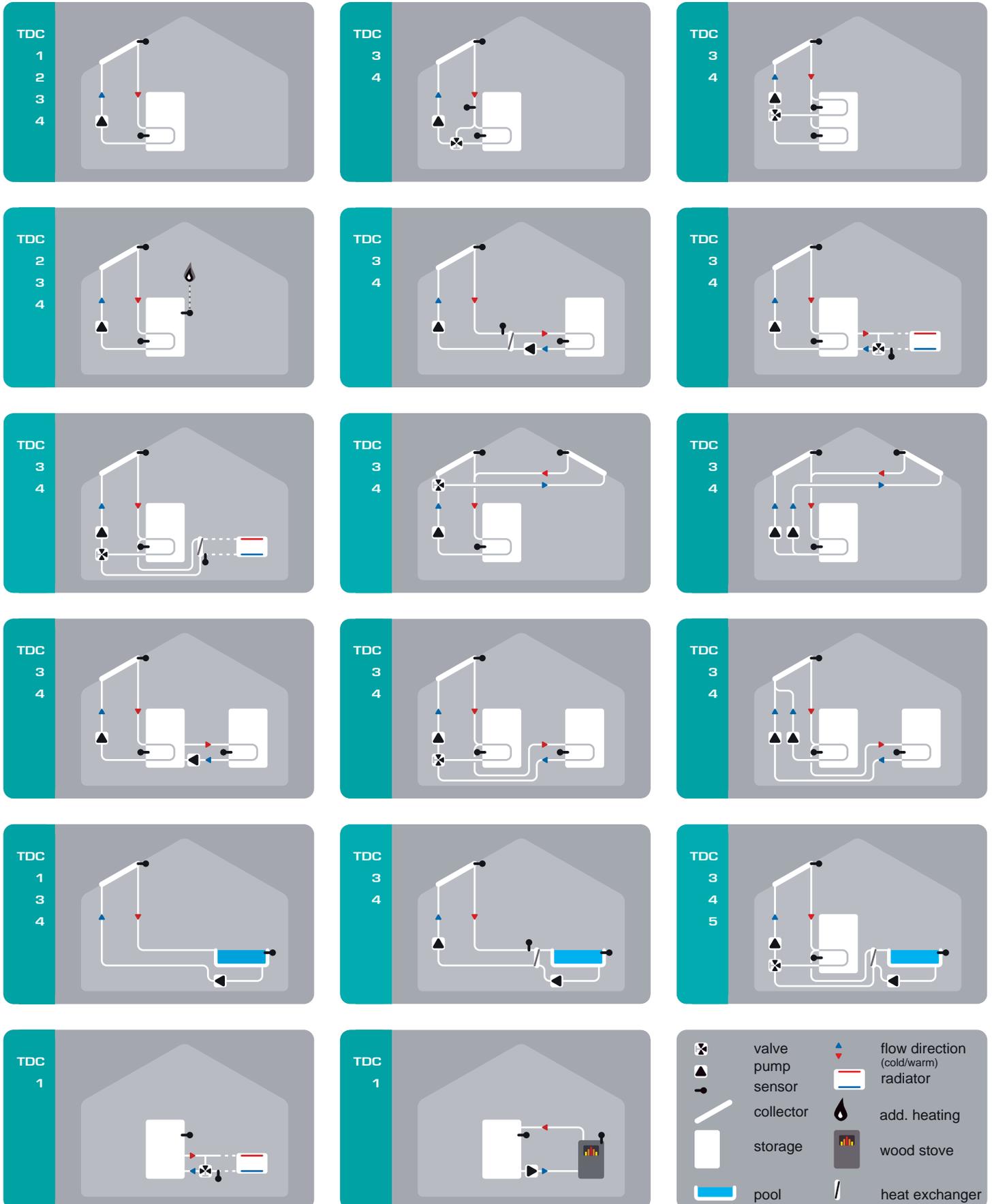
The STDC presents the functionality of a TDC1 in a small housing, with the same comfortable display and menu.

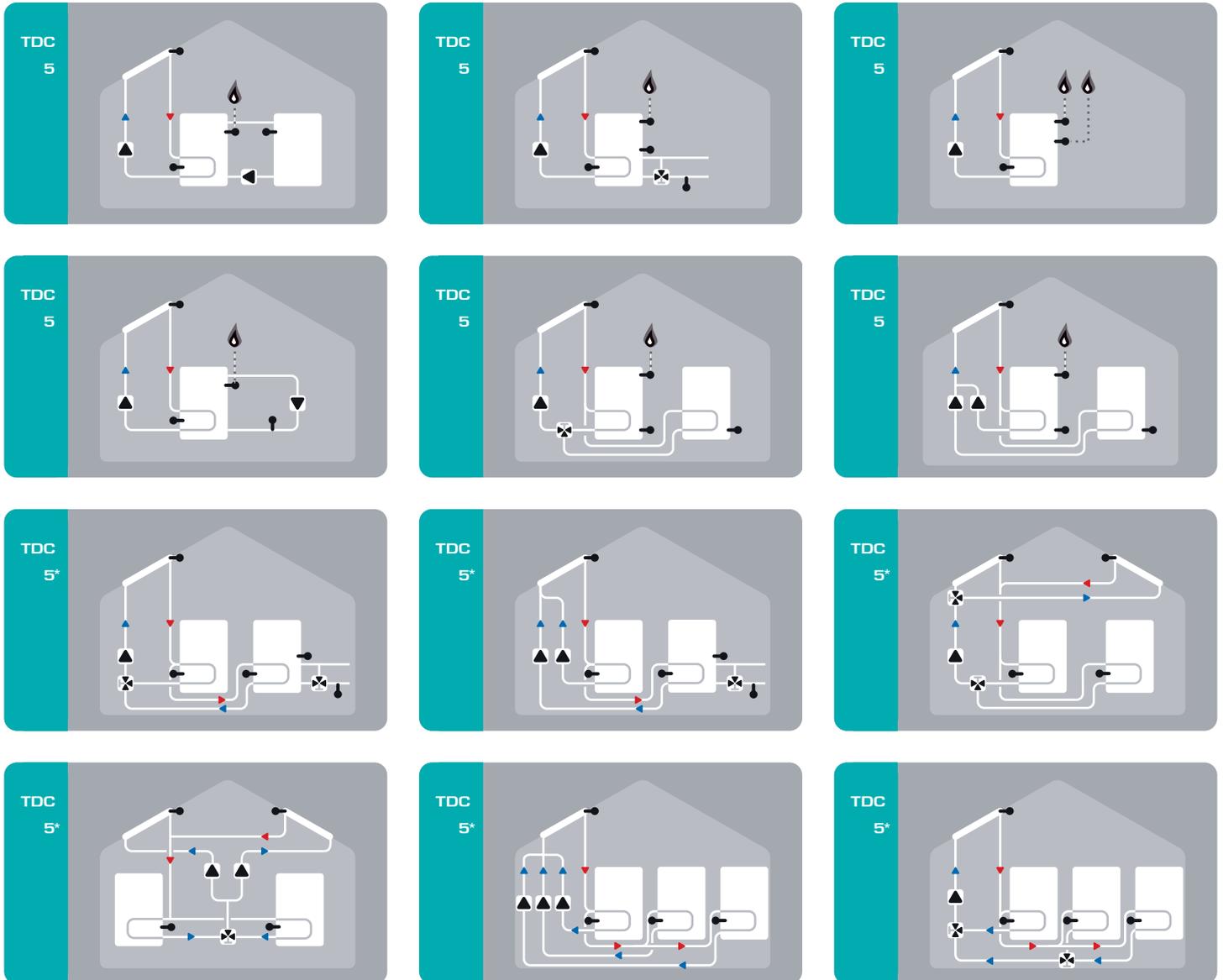
The compact size H=115mm W=86mm D=45 allow the integration into e.g. single strand pump groups.



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## Hydraulic variants





\*Hydraulic variants will be integrated into the TDC5 soon .

Versions	TDC 1	TDC 2	TDC 3	TDC 4	TDC 5
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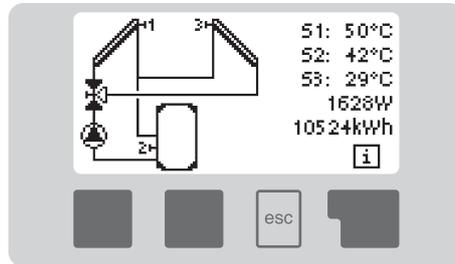
. Probe input Pt1000	2-3	2-3	2-3	4	4-6
. Relay outputs 230V AC on/off	1	1	1	1	2
. Relay with electric speed control	-	1	1	1	1
. Number of applications	5	3	15	15	6
. Simple heat metering	yes	yes	yes	-	yes
. Heat count with flow rate and temperature measuring (VFS sensor)	-	-	-	yes	-
. Time and temperature controlled thermostat function	-	yes	-	-	yes
. Legionella protection via solar	yes	yes	yes	yes	yes
. Legionella protection via additional heating	-	-	-	-	yes

# Temperature Difference Controller TDC

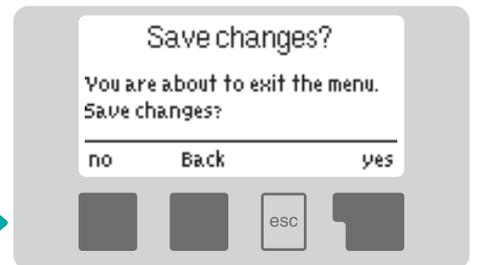
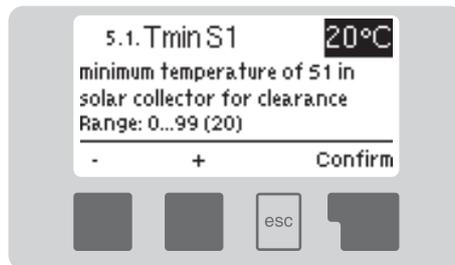
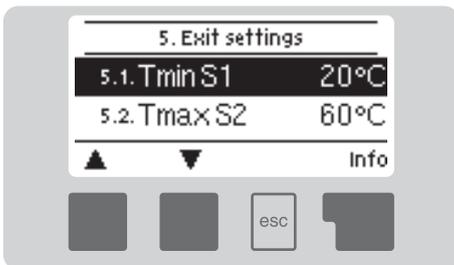
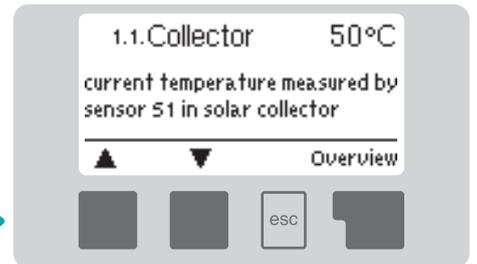
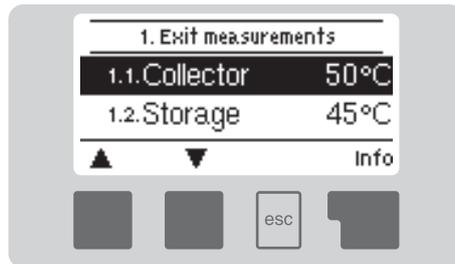
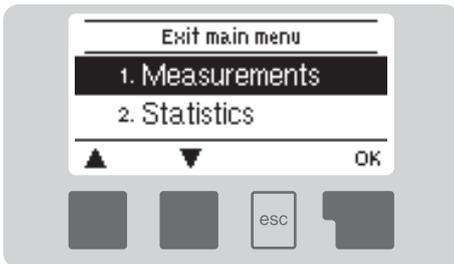
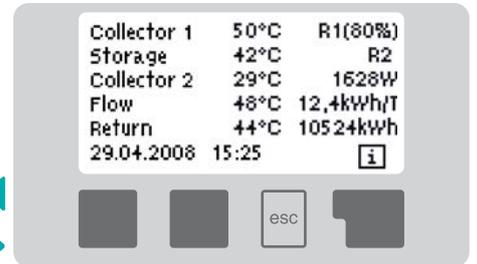
## Operator guidance



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



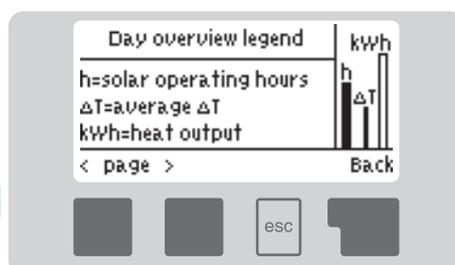
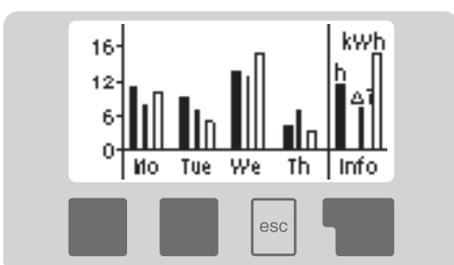
The display of the current measured values and the operating conditions can be performed in a graphic mode with animation or also in a text mode with corresponding explanations.



The clear menu offers options for request, analysis and setting as well as special functions such as priority circuit, protection and speed program, jump-start for vacuum tubes, recooling, rinsing functions for drain-back systems, error memory with date and event, etc.

The self explanatory operator guidance allows the simple request of the data and further information about the individual measured values.

The simple parametrising will be supported by the explanation of the corresponding setting. Safety requests and menu blockers will protect from unintended misadjustment.



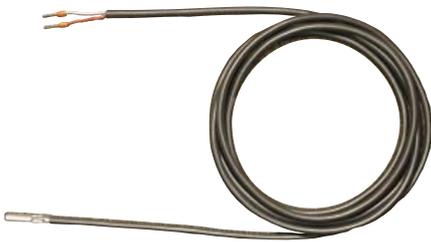
The function control and the long term monitoring of the installation is provided by recording and evaluating of the data. Statistics for days, weeks, months and years can be called on.

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## Probes

The SOREL temperature probe with Pt1000 probe element provides for a precise temperature recording.

The probes are available for diverse applications with various cable lengths as well as in different categories of temperature stability up to 300°C.



## Immersion sleeves

The SOREL immersion sleeves are equipped with a conical test prod for rapid and exact heat transmission to the probe. They are equipped with a PG7 screwed cable gland with silicon joint and are available in lengths from 30 to 400mm in different types of material such as brass, copper or special steel.



## Valves

For switching processes in thermal solar and heating installations 2- and 3-way zone valves are available. Mixer automates are specially appropriate for the use on sampling points where a scald-proof function is required such as for the solar storage tank.



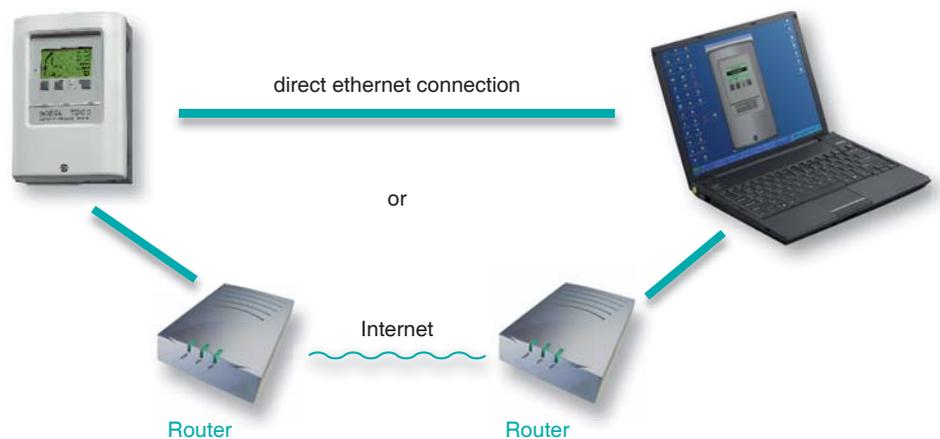
## Ethernet connection

Several TDC controllers are also available as Ethernet version. The via HTTP interface configurable network device is fully integrated in the controller.

The controller can be connected directly to a Local Area Network (LAN) or to a gateway/router, so that the unit can be controlled remotely via internet.

With the remote administration all functions, including statistics and measurements, can be handled within the controller.

Additionally, data files readable by standard computer programs are created via data logging function.



## SOREL

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