

DTC 500

FIRST DIFFERENTIAL THERMOSTATS

for various heat systems

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FIRST DTC 500 is a microprocessor aided regulator, developed for heating of sanitary and central water from three (or less) heating sources, such as the collector, boiler, electrical heater etc.

- It has 10 pre-defined basic system layouts. For each basic system layout, specific adjustments are already stored.
- Developed for heating of sanitary and central water from three (or less) heating sources.
- Digital settings of all parameters

OPERATION

The DTC 500 is a microprocessor aided regulator, developed for heating of sanitary and central water from three (or less) heating sources, such as the collector, boiler, electrical heater etc. It establishes the optimal use of energy with the order of operations of individual energy source programming loops and set application programming parameters.

It has 10 pre-defined basic system layouts. For each basic system layout, specific adjustments are already stored.

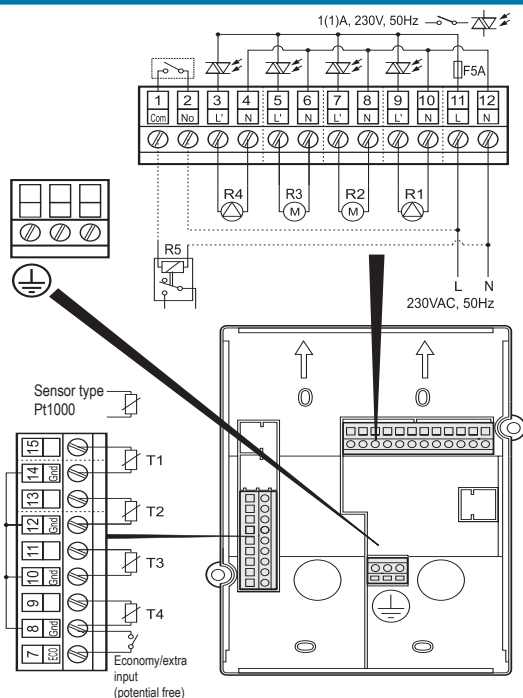
MAINTENANCE

Differential thermostat requires no maintenance.

COMPATIBILITY

DTC 500 is compatible with all motorized ball valve series EMV 110 S9000 and UNI series. The regulator can control: up to 2 electric pumps (PSC – pump speed control), up to 3 actuators, a boiler, an electric heater, EMV 110–4230-TC actuator, which is connected parallel to the pump (PSC – pump speed control).

CODE AND ELECTRICAL CONNECTION



TECHNICAL DATA: DIFFERENTIAL THERMOSTAT

Control:	P, (PSC 7%-100% pump speed control)
Supply voltage:	230VAC, 50Hz, max. 5VA
Terminal range:	0,3..1,6 mm ²
Outputs:	4 x Triac output (1A) with PSC possibility (pump speed control), 1 x relay output 1(1)A, 230VAC, 50Hz
Inputs:	4 x analog sensor, 1 x potential-free ECO input
Temperature sensors measuring range:	-40..+180°C
Storage temperature:	-20°C.. + 70°C
Operating temperature:	0..+50°C
Dimensions (HxWxD):	162x121x46
Sensors type:	PT1000
Weight:	464 g

PARAMETER SETTINGS

- You can set the following parameters:
- minimal temperature of heating source (low temperature of collectors)
 - hysteresis of the sensors T1, T2, T3, T4
 - set temperature
 - switching difference (T1-T2 or T3-T4)
 - collectors frost protection (switch ON at <2°, OFF at >5°C)
 - domestic hot water tank cooling (when the water in the water tank is overheated, the controller cools down the water in the water tank through the night)
 - maximal temperature of collectors
 - setting economical temperature of the water tank
 - ABS - anti blockade function for actuators
 - switch ON/OFF one of the heating circuit
 - switching delay of output R5 - in case of electrical heater
 - heating source priority
 - choosing PSC value - pump speed control - setting minimal speed of pump (30%..100%, by step of 7%)
 - safety functions:- collectors overheating - in case of overheating (>155°C) the controller switches of the pump and closes the actuator
 - domestic hot water tank overheating - in case of overheating (>97°C) the controller switches of the pump and closes the actuator

Code	Type	Description
*13039	DTC 500	4 sensors, mounting kit

* Units are available on special request.

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Let First be your first choice.



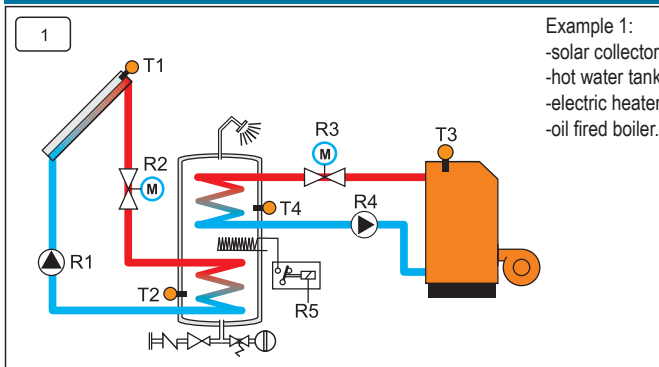
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FIRST DIFFERENTIAL THERMOSTAT

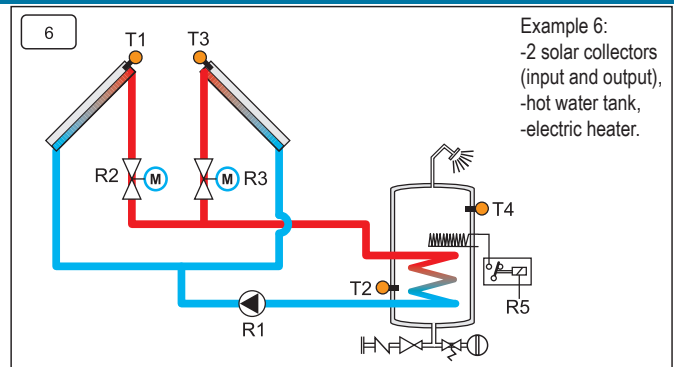
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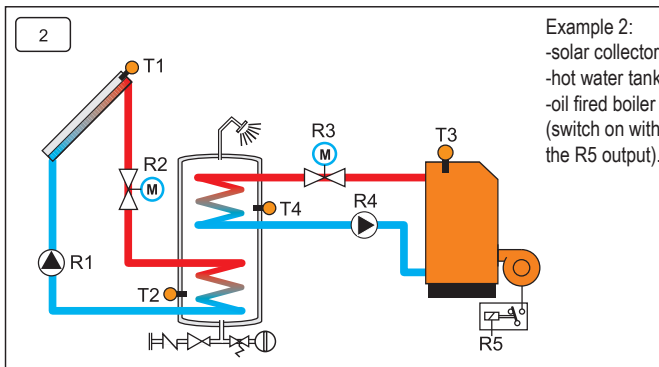
INSTALLATION EXAMPLES



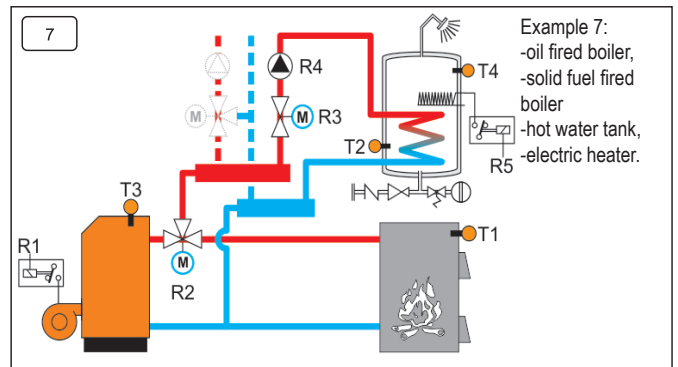
Example 1:
-solar collector,
-hot water tank,
-electric heater,
-oil fired boiler.



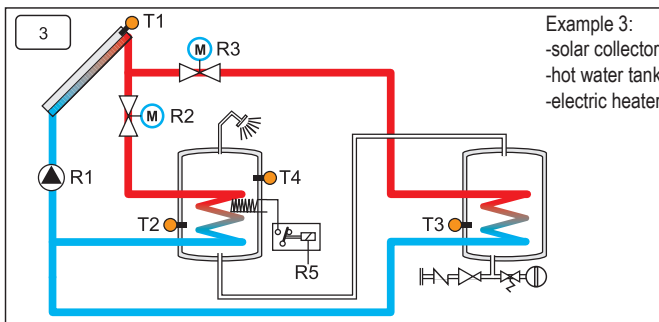
Example 6:
-2 solar collectors
(input and output),
-hot water tank,
-electric heater.



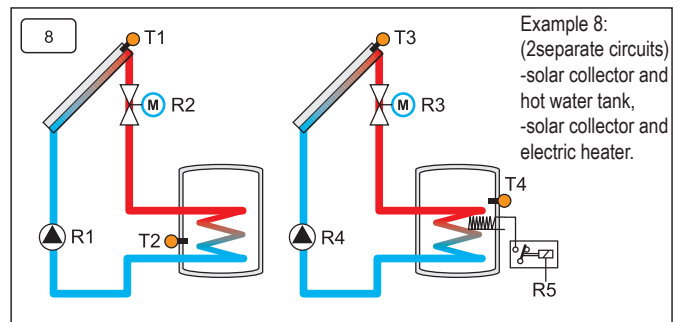
Example 2:
-solar collector,
-hot water tank,
-oil fired boiler
(switch on with
the R5 output).



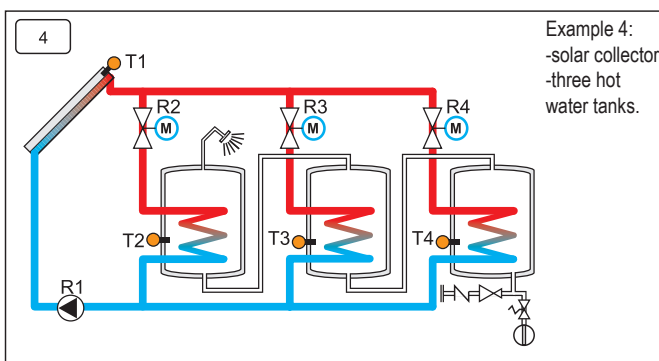
Example 7:
-oil fired boiler,
-solid fuel fired
boiler
-hot water tank,
-electric heater.



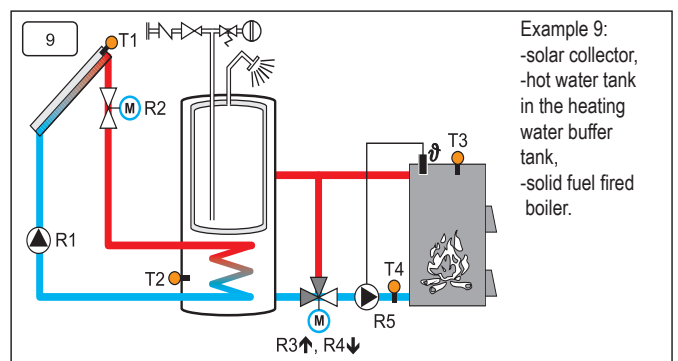
Example 3:
-solar collector,
-hot water tank,
-electric heater.



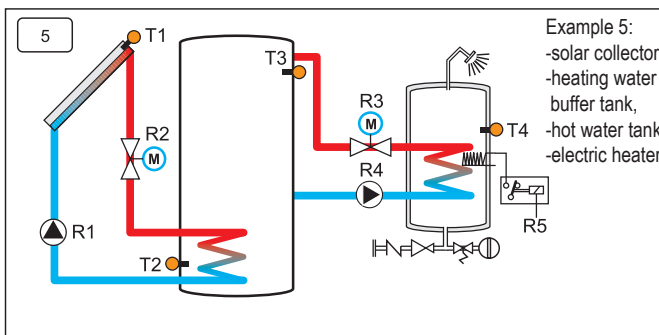
Example 8:
(2separate circuits)
-solar collector and
hot water tank,
-solar collector and
electric heater.



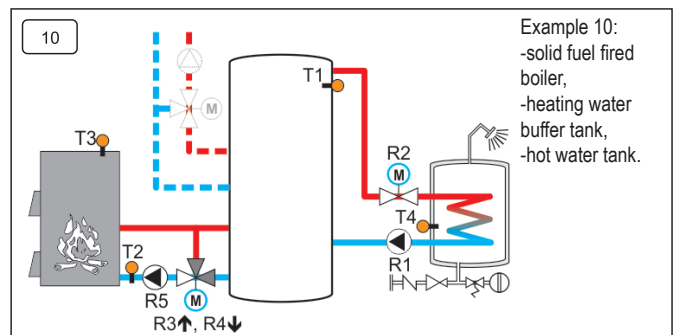
Example 4:
-solar collector,
-three hot water
tanks.



Example 9:
-solar collector,
-hot water tank
in the heating
water buffer
tank,
-solid fuel fired
boiler.



Example 5:
-solar collector,
-heating water
buffer tank,
-hot water tank,
-electric heater.



Example 10:
-solid fuel fired
boiler,
-heating water
buffer tank,
-hot water tank.

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