

AUTOMIX[®] CT

ELECTRONIC CONSTANT TEMPERATURE CONTROL MOUNTING AND OPERATING INSTRUCTIONS

Automix CT is a compact electronic constant temperature control designed to operate 3- and 4-way mixing valves in radiant floor heating, solid fuel and industrial applications. The supply temperature can be controlled steplessly between 0°C and 90°C. In case of power failure the motor can be controlled manually.

Automix CT works continuously and proportionally. Through data from the supply sensor the motor with built-in electronics controls the valve. The temperature setting will be very accurate. The quick and easy do-it-yourself installation saves on labor charges.

FUNCTIONS

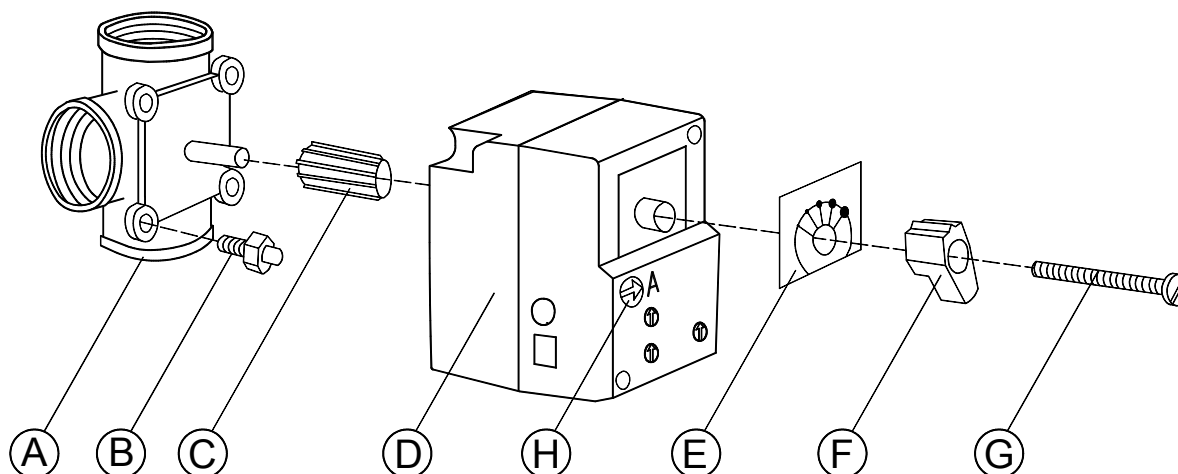
Stepless setting of supply temperature from 0°C to 90°C
Manual control in case of power failure
The motor pulse can be set steplessly from 0,3 sec to 2 sec

DELIVERY PARTS FOR ART.NO 1320

1. AUTOMIX CT valve motor 24 VAC 50/60 Hz with built-in electronics
2. Mounting kit
3. Supply temperature sensor T1 with fix band and 1 meter wire
4. Adapter 230/18 VAC 190 mA with 1.7 meter wire
5. Mounting and operation instructions

MOUNTING

AUTOMIX CT VALVE MOTOR



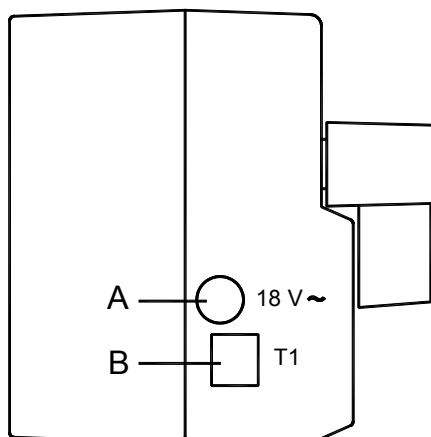
Picture 1. Mounting of motor

1. Turn the spindle of valve **A** counter clockwise to the end position (open or closed). Remove the knob/handle without changing the position of the spindle.
2. Screw the anti-rotation stop **B** in a convenient hole on the valve (if necessary remove an existing screw).
3. Slide linkage **C** over the valve spindle. Place motor **D** onto linkage **C** until the anti-rotation stop **B** engages in the slot of the motor.
4. On delivery the motor is in the anti-clockwise position. Turn scale **E** according to the open/closed direction of the valve.
5. Place handle **F** onto the motor ensuring that the arrow points to the left end position of the scale. Tighten the whole unit by means of screw **G**.
6. Using a screwdriver (No.3) turn the disengaging button **H** from "A" to "HAND" position and rotate the valve by means of handle **F** from one end position to the other.
It is important that the motor can be moved from one end stop to the other (90°).
7. Connect the motor according to Picture 2 below.
8. Turn the disengaging button **H** back to "A" which is the AUTOMATIC-position.

SUPPLY TEMPERATURE SENSOR AND ADAPTER

Supply temperature sensor T1 is fastened on a non-insulated part of the supply pipe 1 meter after the mixing valve. For optimum temperature measuring the pipe has to be insulated afterwards.

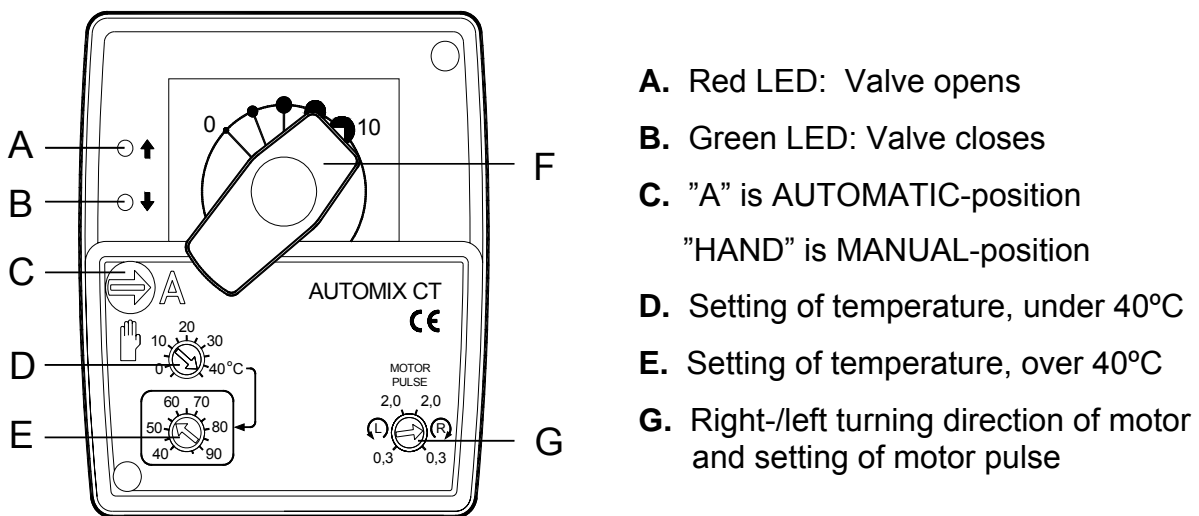
Adapter in connected to **A**, supply sensor T1 to **B**.



- A.** Adapter
- B.** Supply temperature sensor T1

Picture 2. Connections of motor

OPERATION



Picture 3. Front panel of motor

Desired temperature is set with knob **D** and **E**. When knob **D** is set over 40°C the temperature scale is on knob **E**. In Picture 3 the temperature is set on 55°C. When motor opens the valve the red LED **A** is bright and when motor closes the valve the green LED **B** is bright. When motor doesn't move no LED is bright.

TURNING DIRECTION OF VALVE MOTOR

Right or left turning direction of motor is set with knob **G**. At delivery the knob **G** is set for right opening direction **R**, which means the motor opens the valve clockwise. For left opening direction the knob **G** is set on **L**, which means the valve will open anti-clockwise.

MOTOR PULSE

Normal motor pulse is 1 sec. If the supply temperature is not stable owing to the flow speed, the motor pulse can be chosen between 2 sec and 0,3 sec with knob **G**. For example if the difference between supply and return temperature is over 10°C and the temperature in swinging the knob **G** is turned towards 0,3 sec.

TROUBLE SHOOTING

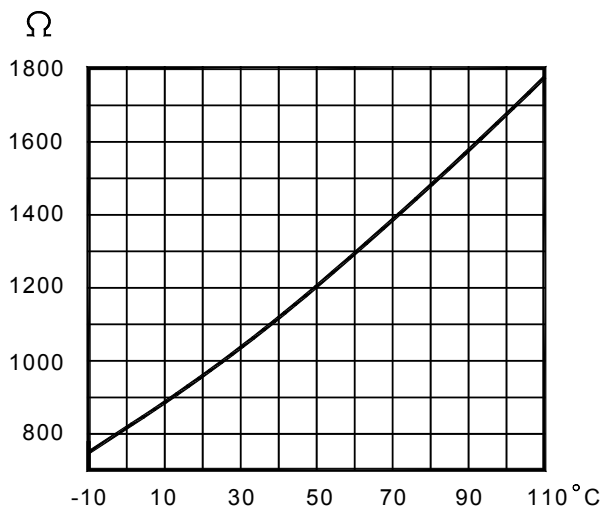
If the system should not work satisfactorily – check that:

1. the boiler or storage tank temperature is correct
2. the power supply and condition of fuses
3. the circulating pump is working
4. the gate valves are open
5. the mixing valve turns easily
6. there is no air in the system
7. the disengaging button **H** is in "A" AUTOMATIC-position

8. the system installation is correct and it works with manual operation
9. the resistance value of the supply sensor T1 is correct. See picture 4.

SENSOR RESISTANCE

The resistance is measured at the two wires in the middle of the 4-wire cable contact.



-10 °C	754 Ω
0 °C	820 Ω
10 °C	889 Ω
20 °C	963 Ω
30 °C	1039 Ω
40 °C	1119 Ω
50 °C	1202 Ω
60 °C	1289 Ω
70 °C	1379 Ω
80 °C	1472 Ω
90 °C	1569 Ω
100 °C	1670 Ω
110 °C	1774 Ω

Picture 4.

TECHNICAL DATA

- PI-control with microprocessor
- Voltage 18 VAC 50/60 Hz
- Adapter 230/18 VAC 190 mA with 1.7 m wire
- Power consumption 3 VA
- Temperature range 0°C ... +90°C, stepless
- Motor pulse 0,3 sec ... 2 sec, stepless
- Angle of rotation electrically limited to 90°
- Torque 5 Nm
- Running time 140 sec
- 2 LEDs for turning signal
- Manual operation in case of power failure
- Max. temperature for sensor 110°C
- Ambient temperature -10°C ... 80°C
- Dimensions 80 x 90 x 93 mm
- Protection type IP41
- Protection class II
- Service free
- Weight 0,4 kg