



Installation and operating instructions

ZAS 3.TV - The token-operated shower control with connection to hot and cold water

BASIC TECHNICAL INFORMATION

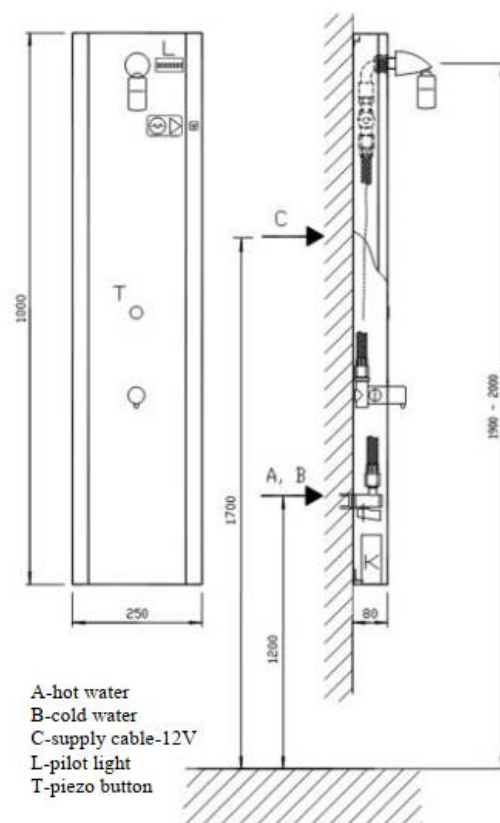
Type of token:	ZT 1
Type of shower arm:	SP 3
Power supply:	12 V, 50 Hz
Power requirement:	6VA (2 VA electronics, 4 VA valve)
Adjustable time of taking shower:	10 sec up to 42.5 min (in 10 sec steps)
Adjustable time of pause:	0 sec up to 42,5 min (in 10 sec steps)
Quantity of water:	1,2 up to 280 liters for SP 2 & SP 3; 2 up to 510 liters for SP 1
Water inlet:	G 1/2" – inner bolting
Dimensions:	1000x250x160 mm
Water pressure:	0,2 – 1,0 MPa
Weight:	10,5 kg
Recommended source of power supply:	ZAC 1/20 (intended for up to 3 pcs. ZAS) ZAC 1/50 (intended for up to 8 pcs. ZAS)
Weblink:	ZAS 3.TV

Function of the token-operated shower control

- The shower control enables two operations (modes) – paid and unpaid
- After switching on the power supply, pilot lights (placed in column beside the shower arm) will light up and then start gradually switching off so that only one pilot light is lit up (moving point). After completion of one cycle, 2 pilot lights start blinking until a coin is inserted (for paid mode) or 3 LED lights blink untill the piezobutton START/STOP is pushed (unpaid mode).

Paid control

- When a coin is inserted all pilot lights will light up. The electronics are activated and after pressing a button START/STOP an electromagnetic valve opens the water inlet. The pilot lights start gradually switching off. After the next press of the button START/STOP the electromagnetic valve is closed and the water stops flowing and the switching off of the pilot lights are stopped. This cycle (opening and closing) can be repeated several times. The total time of opening of the electromagnetic valve is adjustable from 10 sec. up to 42.5 minutes (1 step = 10 sec.). The indication of the remaining time of water flow is in tens of a percent from the total adjustable time. For example if the total adjustable time of water flow is 2 minutes, the pilot lights switch off after 12 sec.

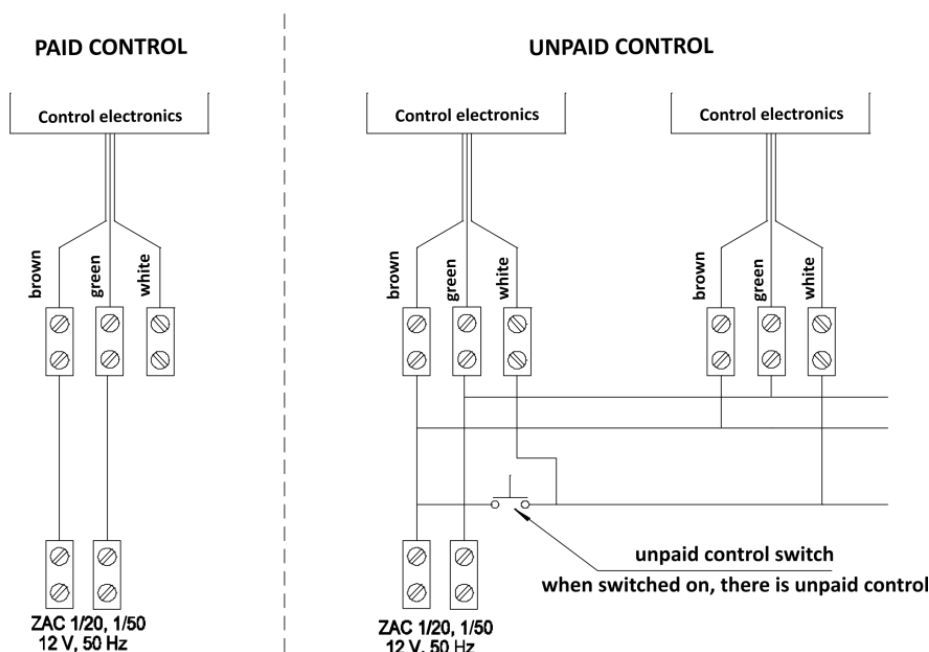




- When the total time of water flow has run out, all pilot lights switch off and the water stops flowing, after approx. 3 sec. two pilot lights start to blink. The user must insert a new token if he wants to continue taking a shower. ZAS 3.1 does not sum up the tokens. In the event that there is any leftover time on the control, this is deleted after inserting a token and a new cycle is set.

Unpaid control

- When pushing the piezo button START/STOP all the pilot lights will light up and water starts flowing. Manual control and indication are same as with the paid operation (mode). When the preset time of water flow has run out, the electromagnetic valve will be closed, water stops flowing and the adjustable pause will follow. This pause is indicated by the lights on display which are gradually switching off. The end of the pause is indicated by three pilot lights on display – then the shower can be used again. If the user wants to break the pause and start the showering, he must insert the token.



- Water temperature is set by means of a thermostatic valve. Its range is limited by a stop to approx. 25°C – 45°C. Setting the time of water flow (time when the electromagnetic valve is opened) is described in following text. With its construction the token automat ZAS 3 is designed to simply replace the existing shower mixing tap with the water inlets distance of 90-160 mm. Token-operated control ZAS is standardly equipped with SP 3 shower arm but can be supplied with SP 1 or SP 2 shower arm as per order.
- SP 1 – shower arm (quantity of water approx. 12 l/min)
- SP 2 – economic shower arm ANTIVANDAL (quantity 7 l/min)
- SP 3 – economic shower arm (water flow 7,5 l/min)

Installation

Requirements for setting up construction

- Set up cable for power supply – 12 V, 50 Hz from source of power supply ZAC. Should the function of switching to the unpaid operation (mode) be required, the cable with three conductors must be used. For paid operation (mode) will be sufficient the twin conductor.
- Installation of ZAS does not need any particular construction setting. Its construction enables connection to existing water inlets at height of approx. 1200 mm.
- A filter shall be set in the water inlets for removing mechanical dirt from water. It increases the reliability of closing the electromagnetic valve.



Assembly

1. Set up installation frame of the control by means of screws into joggles in the wall.
2. Screw corner valves (**Package contents**) with filter (strainer gasket 3/8" – **Package contents**) to water inlet pipes (with inner bolting).
3. Connect the shower control to water inlets by means of flexible hoses. The red hose must be connected to hot water, and the blue one to cold water. Thermostatic valve will not work properly when connected conversely. The outlets of the valves must be directed in the way to avoid hose breaking.
4. Connect 12 V, 50 Hz electricity cable to the distribution frame. For the paid operation (mode) the yellow and green conductor must be connected (do not connect the blue one). For unpaid operation (mode) the blue and green conductors must be connected through.
5. Switch on ZAC source of power supply.
6. Check out function of the control and as per individual requirement set the time of opening of the electromagnetic valve as per chapter Setting.
7. Set up the stainless steel casing of the control to installation frame and from the bottom part fix it by screwing out inbus screws so they fit into the openings in the frame.

Setting

- Time setting can be proceeded only when the automat is in "paid mode" and it is possible to carry it out only up to 20 minutes after switching on the power supply. Then it is necessary to switch off and on the source of power supply.
1. Place the magnet underneath the opening for inserting tokens and scroll it down – all pilot lights simultaneously light up.
 2. Take away the magnet – all pilot lights simultaneously blink and time setting is carried out.
 3. After required period of time (= time of shower) place again the magnet to confirm the time. Then remove it again – individual pilot lights start lighting up in sequence. It is impossible to set the time shorter than 10 sec. If the time between first and second placing of the magnet is shorter than 10 sec, then the automat will be automatically set to 10 sec.
 4. The control proceeds to "operation" mode, two pilot lights blink and the time of water flow is set on the control, which is equal to the interval between the first and second placing of the magnet. In case of unpaid control (mode) the pause cannot be set independently, it is set automatically for the same time as the water flow is.
 5. Setting of the pause time is the same procedure as setting the time of water flow, but must be proceeded in „unpaid mode“. If the time of pause is shorter than 10 seconds, it will be automatically adjusted to 0 sec (water can be turned on any time).

Warning

- Token-operated control can be connected only to ZAC source of power supply, in other cases the manufacturer takes neither responsibility for its reliable functioning nor responsibility for eventual damage arising from connection to other voltages.
- Electric connection can be carried out only by a qualified and competent worker. It is necessary to carry out an initial revision of electric devices before starting operation. The user is obliged to carry out revisions of the electrical device during its operating life.
- **The user shall ensure that the water does not freeze. If this happens, irreparable damage to thermostatic and electromagnetic valve may occur.**



Possible problems and their solutions

Problem	Cause	Solution
After connecting to the electricity the pilot lights do not turn on	Not connected to the power supply Connected to 230 V	Connect the power supply Irreparably destroyed
Electronics work properly, water does not flow	Connected to switching source of power supply (e.g. for hallogen lighting), the electromagnetic valves will not function due to higher frequency	Use the power supply recommended by the producer
Impossible to set the water temperature	Inverse connection of hot and cold water	Connect the hoses in right way – red on hot water, blue on cold water
Not enough water flows	Choked filter of corner valve Dirt in shower arm	Clean the filter Clean the shower arm
After inserting token - control does not switch on – all the pilot lights are on	Blocked token in scanner	Release token and/or clean the trace for tokens
Water flows constantly even after disconnection from electricity	Dirt in the valve underneath membrane	Clean valve

Maintenance and cleaning

- The device was made from the stainless steel of quality corresponding with ČSN 17 240 (AISI 304) standard and, therefore, it must not be operated in chemically-aggressive environment.
- Preparations containing chlorine must not be used for its cleaning!!**
- Cleaning agents by WÜRTH are recommended:
 - Metal renewal agent - Order No. 893 121 1
 - Stainless steel spray treatment - Order No. 0893 121 – K.
- If corrosion has already occurred, it can be removed with a cleaner INNOSOFT B 570 from the company Emergo.

Valve cleaning

- Screw out the three spins holding the coil. Remove the coil; carefully take out plastic covering of the core; (be careful not to lose the spring). Remove the membrane, clean the space underneath. Check out the clearness of both inlets in the plastic centre of the membrane and insert the valve. It is necessary to observe the water flow direction at the back assembly – it is indicated by an arrow on the valve.