CLAGE

Zip

Zip
Instantaneous Hot Water

Electronically controlled instantaneous water heater

DSX: 27940 - 50 °C and 27941 - 60 °C models

Instructions for the user

For 50 °C models, the appliance delivers water not exceeding 50 °C in accordance with AS3498

CLAGE

Zip

Contents

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1. Safety instructions

Please read these instructions carefully before installing or using the appliance! Keep the instructions handy with the appliance for future use!

Installation, initial operation and maintenance of this appliance must only be conducted by an authorised professional, who will then be responsible for adherence to applicable standards and installation regulations. We assume no liability for any damages caused by failure to observe these instructions.

- Do not use the appliance until it has been correctly installed and unless it is in perfect working order.
- Do not remove the front cover under any circumstances before switching off the mains electrical supply to the unit.
- Never make technical modifications, either to the appliance itself or the electrical leads and water pipes.
- The appliance must be earthed at all times.
- Pay attention to the fact that water temperatures in excess of approx. 43 °C are perceived as hot, especially by children, and may cause a feeling of burning. Please note that the fittings and taps may be very hot when the appliance has been in use for some time.
- The appliance is only suitable for domestic use and similar applications inside closed rooms, and must only be used to heat incoming water from the mains supply.
- The appliance must never be exposed to frost.
- The values stated on the rating plate must be observed.
- In case of malfunction, disconnect the fuses immediately. In case of leaks, cut off the mains water supply instantly. Repairs must only be carried out by the customer service department or an authorised professional.
- This appliance can be used by children aged 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be performed by children without supervision.
- If the appliance is factory equipped with a power supply cable, it must be replaced with an original spare cable from the manufacturer in case of damage by an authorised technician in order to avoid any hazards.
- For appliances with direct connection, an all-pole disconnecting device with a contact opening width of ≥ 3 mm per phase must be provided at the installation end, according to Australian wiring rules AS/NZ3000.
- The wall bracket must be secured with the supplied screws and dowels. The appliance must be secured to the wall bracket. The appliance may only be operated if it has been properly mounted on the wall bracket.
- The prescribed nominal pressure stated on the rating plate may not be exceeded at any time.
- The required water resistance may not fall below the value stated on the rating plate at any time.

To observe <u>additionally</u> for pressureless installation:

- The water outlet behind the devices must not be blocked, and the water flow must not be restricted.
- The water outlet facilities, such as shower head, jet control and other outlet unit, must be decalcified regularly. Deposits must be removed in regular intervals.
- Only the fittings recommended by the manufacturer may be used.
- If the appliance is exclusively connected to a single shower, only the shower heads recommended by the manufacturer may be used. No other fittings or appliances which decrease the water flow to the shower may be installed.

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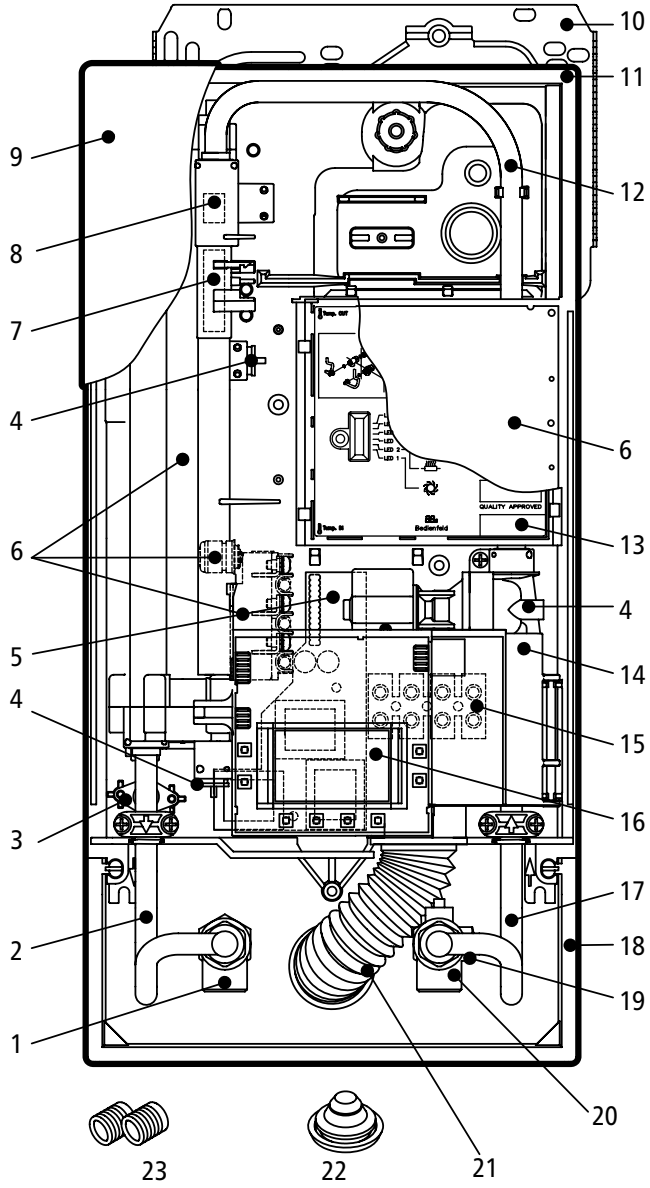
2. Overview

When ordering spare parts, please always specify the appliance model and serial number.



Pos.	Part.-No.	Description
1	**99381**	**Hot water connection**
2		Outlet pipe
3		Safety thermal cut-out (STB)
4	**99382**	**DSX / DEX thermal sensor set 2.1**
5	**99383**	**Servomotor with electronic 2.1**
6		Repair kit DSX
7	**99384**	**Flow sensor**
8	**99385**	**Non-return valve**
9		DSX hood
10		Bottom part
11		Wall bracket
12		DSX connecting pipe
13	**99386**	**PCB cover 2.1**

Pos.	Part.-No.	Description
14		Control panel support
15		Connecting terminal
16	**99387**	**DSX control panel**
17		Inlet pipe
18		Frame
19	**99388**	**Fine filter**
20	**99389**	**Cold water connection**
21		Water splash protection sleeve
22		Grommet
23		Screw-in nipples 1/2"
not shown:		
24		Faceplate
25	**99390**	**Fittings kit**
26		Operating foil

Parts in **Bold Type** are available as **Spare Parts**. Other parts are available on request

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3. Technical data

Model	DSX							
Part no.	27940 - 50 °C model				27941 - 60 °C model			
Energy efficiency class	A *)							
Rated capacity / rated current	18 kW..27 kW (26 A..39 A)							
Chosen capacity / current	18 kW (26 A)	21 kW (30 A)	24 kW (35 A)	27 kW (39 A)	18 kW (26 A)	21 kW (30 A)	24 kW (35 A)	27 kW (39 A)
Electrical connection	3~ / PE 380..415 V AC			3~ / PE 400 V AC	3~ / PE 380..415 V AC			3~ / PE 400 V AC
Min. required cable size [1]	see note 1)							
Hot water (l/min) [2] max. at Δt = 28 K max. at Δt = 38 K	9.2 6.8	10.7 7.9	12.3 9.0	13.8 10.2	9.2 6.8	10.7 7.9	12.3 9.0	13.8 10.2
Rated volume	0.4 l							
Rated pressure	1.0 MPa (10 bar)							
Connecting type	pressure-resistant / pressureless							
Heating system	Bare wire heating system IES®							
@ 15 °C: Required spec. water resistance Spec. electrical conductivity	≥ 1,100 Ωcm ≤ 90 mS/m							
Inlet temperature	≤ 70 °C							
Flow rate to switch on – max. flow rate	2.5 l/min – automatic [3]							
Pressure loss	0.2 bar at 2.5 l/min 1.3 bar at 9.0 l/min							
Temperature range	20 – 50 °C				20 – 60 °C			
Water connection	G ½“							
Weight (when filled with water)	4.2 kg							
VDE class of protection	I							
Noise level test certificate	PA-IX 6822/I							
Type of protection / safety	IP25							

*) The declaration complies with the EU regulation No 812/2013
1) The cross sectional area of the connection cable must be in accordance with the power rating of the appliance and the specific requirements of AS/NZS 3000
2) Mixed water
3) Electronically controlled depending on the desired temperature and cold water temperature

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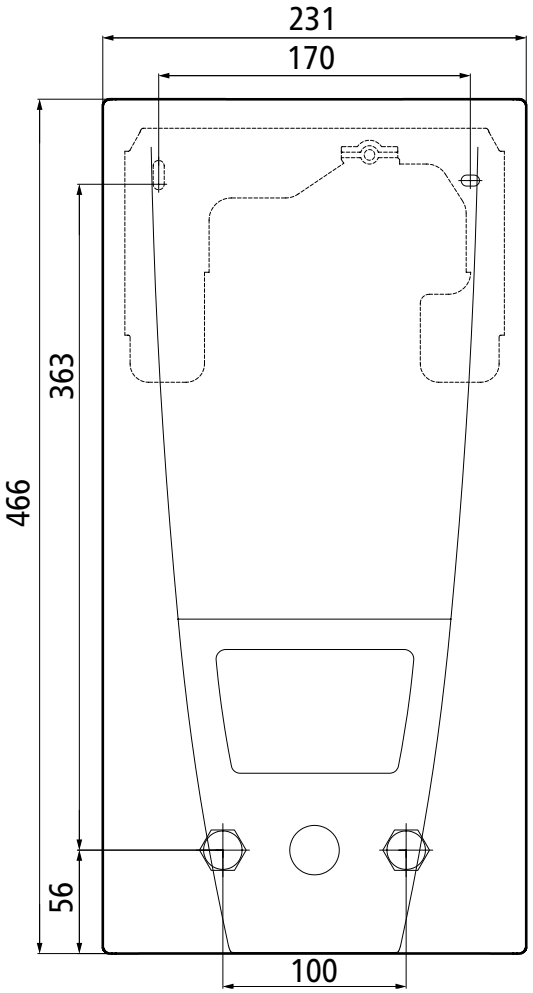
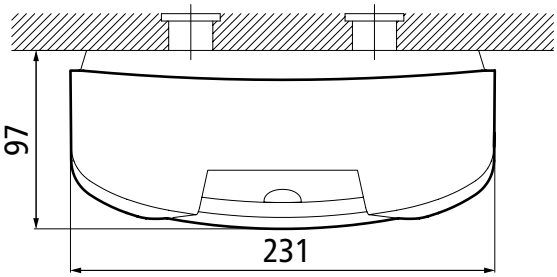
4. Dimensions



Dimensions in mm



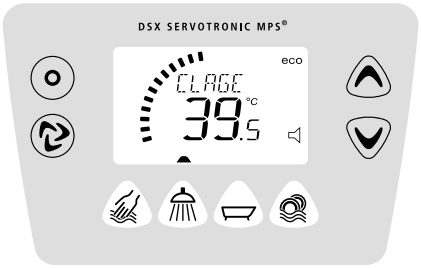
5. Description of the appliance

The instantaneous water heater DSX is a electronically controlled, pressure-resistant water heater for a decentralised water supply to one or more tap connections.

Its electronic control regulates the power consumption depending on the selected outlet temperature, the respective inlet temperature and the flow rate, thus reaching the set temperature exactly to the degree and keeping it constant in case of pressure fluctuations. The required outlet temperature can be entered within a range between 20 °C and 50 °C (60 °C) and can be read off the digital display.

27940: This appliance delivers water not exceeding 50 °C in accordance with AS3498.

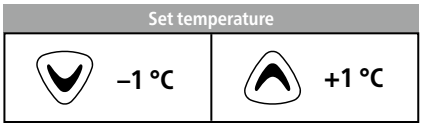
27941: This appliance delivers water not exceeding 60 °C in accordance with AS/NZS 3500.4.

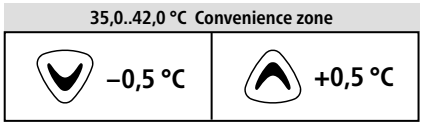


As soon as you open the hot water tap, the instantaneous water heater switches on automatically. When the tap is closed, the appliance automatically switches off.

Temperature setting

You can set the required temperature gradually to a lower or higher value with the arrow keys and . The temperature changes by 1 °C, in the convenience zone between 35 °C and 42 °C even by 0.5 °C, if key is pressed shortly one time. Pressing a key for a longer time changes the temperature continuously. You can select the outlet temperature from 20 °C to 50 °C. The display confirms the temperature changes by "warmer" respectively "colder".





Note: If temperature is set below 20 °C with arrow key the display shows "--" and the appliance switches off the heating function.

Programme keys

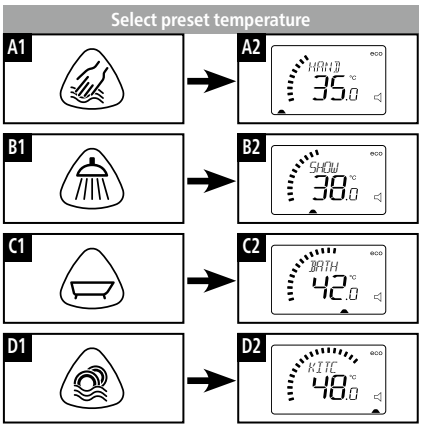
The four programme keys at the device allow to quickly select the preset temperature.

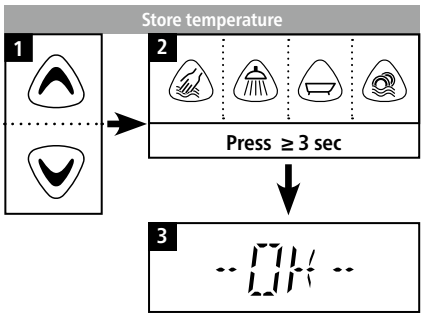
The factory setting for application "hand wash" is 35 °C, for application "shower" it is 38 °C, for application "bath tub" it is 42 °C, and for application "kitchen" it is 48 °C.

You can assign your own settings for the programme keys:

Select the desired temperature via the arrow keys and . Prolonged pressing (at least 3 seconds) of one of the four programme keys stores the previously selected temperature. The display confirms by "--OK--" And an acoustic signal will resound.

The stored temperature is now available to you each time you press the corresponding programme key.





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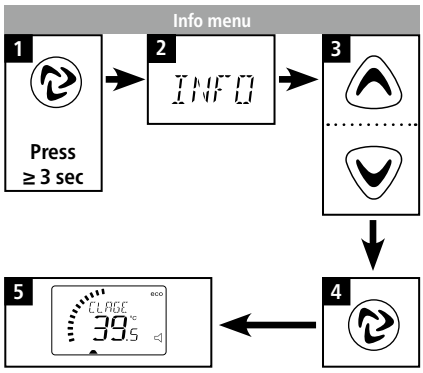

Info menu

The Info menu offers a variety of display values, that provide information on various parameters.

Press the info key for at least 3 seconds to call up the Info menu, the display confirms by "Info".

Using the arrow keys and you can switch over to the individual display information. With info key you will get back to the standard display.

Individual display values as follows:

Power limit
Informs about the current maximum power rating (kW) of the appliance.

Temperature protection
Information, if temperature protection is activated or deactivated.

Operating cost per hour
Indication about the current energy consumption given in Euro per hour.

Working time
Indication of total operating time of the heating given in seconds / minutes / days / years.

Standby time
Indication of the operating time since latest connection of the appliance to the supply voltage given in seconds / minutes / days / years.

Lifetime counter
Indication of the total operating time of the appliance given in seconds / minutes / days / years.

Flow
Indication of current flow rate given in l/min.

Temp in
Indication of inlet temperature (°C).

Temp out
Indication of outlet temperature (°C).

Power
Indication of current power consumption (kW).

Control value
Indication of calibration value of the control system.

Diagnostics
Indication of the last ten diagnostic messages.

Signal
Indication of the current I^2C-connection quality in %.

Software version
Information about installed software version.

Menu item order of "Info menu":

POWER LIMIT
TEMPERATURE PROTECTION
OPERATING COST PER HOUR
WORKING TIME
STANDBY TIME
LIFETIME COUNTER
FLOW
TEMP IN
TEMP OUT
POWER
CONTROL VALUE
DIAGNOSTICS
SIGNAL
SOFTWARE VERSION

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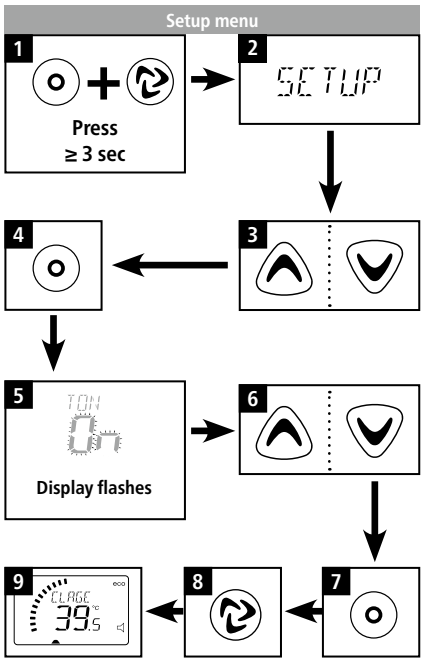


Note: Values of the Info menu cannot be modified or entered. Above mentioned values are only given for your information!

Note: The values are for information only and are not suitable for billing purposes.

Setup menu

The setup menu offers a variety of adjustabilities, affecting the performance and the display of the appliance.

Press the setup key ⊙ and the info key ⟲ simultaneously for at least 3 seconds to call up the setup menu, the display confirms by "SETUP".

Using the arrow keys ⌄ and ⌃ you can switch over to the individual parameters. The setting mode of the individual parameter (e.g. tone) is activated by pressing the setup key ⊙, the display flashes. You can now select the new parameter value with the arrow keys ⌄ and ⌃.

The new parameter value is stored when pressing the setup key ⊙ again. With info key ⟲ you will get back to the standard display.

Individual parameter as follows:

Language

Operating language can be selected.

Setting options:

" 1" German
"0" English

Tone

Activation and deactivation of key tone.

Setting options:

"on" key tone activated
"--" key tone deactivated

Background light

Activation and deactivation of display background light

Setting options:

"on" background light constantly on
"Rt" background light switches on automatically e.g. when keys are pressed, and switches off automatically after some time
"--" background light off

Charges per kWh (ct)

The relevant electricity tariff can be entered.

Setting options:

from 0 ct to 199,90 €

Clock

Time settings can be done

Setting options:

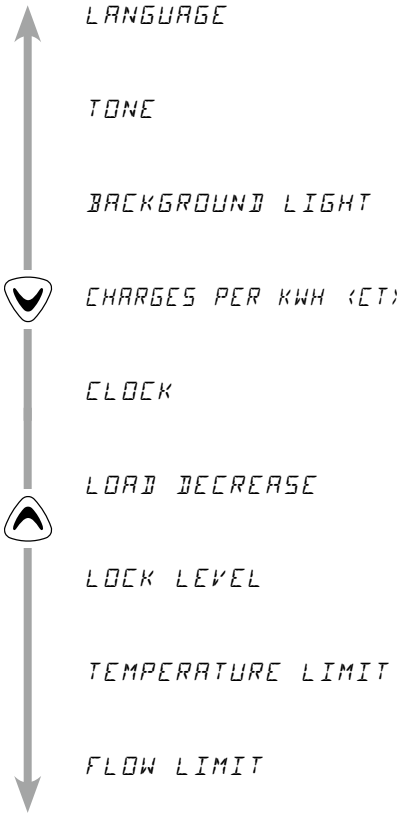
"h" hours
"min" minutes
"s" seconds

The info key ⟲ selects the clock parameter to be changed ("h","min" or "s").

The arrow keys ⌄ and ⌃ changes the set value shown.

Pressing the setup key ⊙ stores the new value.

Menu item order of "Setup menu"



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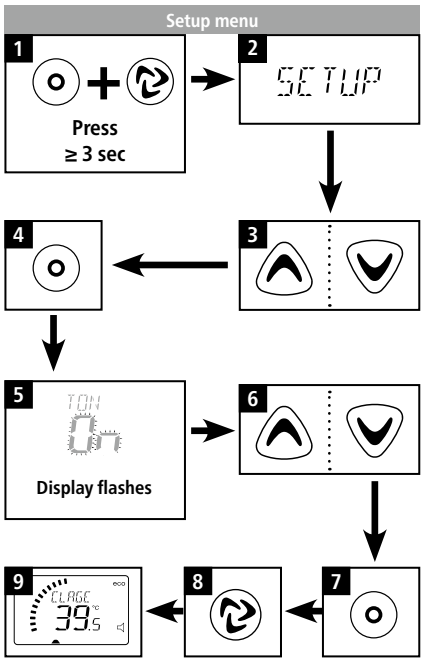


With info key you will get back to the standard display.

Note:
The arrow key resets the display to zero when mode "s" is chosen.
The arrow key deactivates the display of the clock.

Load decrease

Setting of load shedding parameters

Setting options:

"0"	Operation without load shedding relay, factory setting
" 1"	operation with standard load shedding relay
"2"	operation with sensitive load shedding relay

Lock level

Limitation of appliance's operation complexity.

Setting options:

"0"	no restriction (factory setting)
" 1"	factory reset via key (countdown) not possible, parameters can be seen but not be modified in setup menu
"2"	same as "1", additionally the setup menu cannot be opened
"3"	same as "2", additionally nominal value memory (handwash, shower, bathtub, kitchen) not changeable
"4"	same as "3", additionally nominal value not changeable

Temperature limit

The maximum settable temperature can be reduced to any value within the temperature limit.

The Lock level must be activated via placing the jumper to enable the limitation. Refer to the installation manual to this.

Flow limit

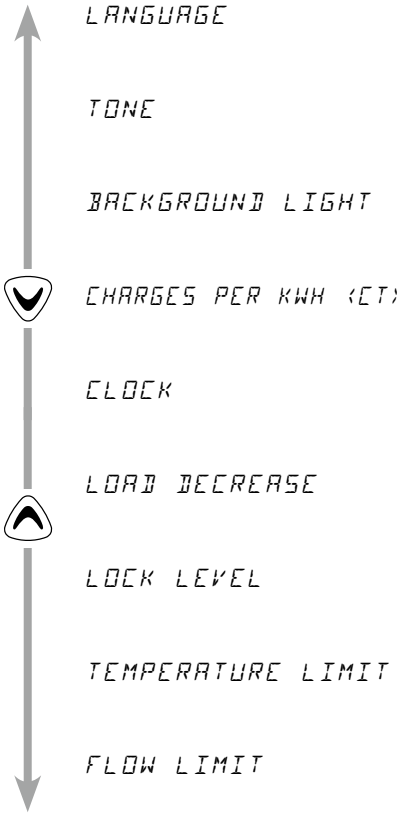
Setting of flow rate limitation.

Setting options:

"--"	no flow rate limitation
"AE"	automatic adjustment, i.e. flow rate is limited in a way so that the selected outlet temperature is reached
"Eco"	flow rate limitation to max. 8.0 l/min
e.g. "9.0"	limitation to a selected value

Note:
"Eco" is displayed when operating mode "Eco" is selected and the set temperature is below 43 °C.

Menu item order of "Setup menu"



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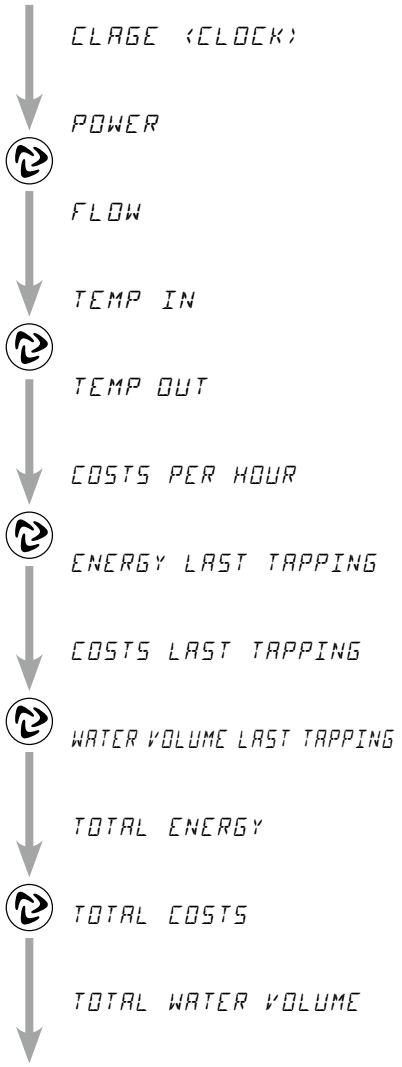
Menu item order of "Energy Efficiency Monitor":



Energy Efficiency Monitor

In the top row of the display, various information can be displayed permanently.

If you press the info key once, the name of the currently selected monitor is displayed as scrolling text. To continue to the next monitor, press the info key a second time while the scrolling text is visible. The name of the monitor will appear as scrolling text.

After the scrolling text, the value of the currently selected parameter will be displayed permanently in the top row of the display.

Individual parameter as follows:

CLAGE (or Clock, if enabled)

This is the normal display mode without an activated Energy and Status Monitor. If the clock was enabled in the Setup menu, it is only shown in normal display mode.

Note:
The menu items "Power", "Flow", "Temp In", "Temp Out" and "Costs per hour" are explained in the chapter "Info Menu".

Energy last tapping

Energy consumption since opening the hot water tap in Wh or kWh.

Costs last tapping

Indication of the costs since opening the hot water tap.

Water last tapping

Display the amount of water since opening the hot water tap in litres.

Total energy

Display of the total accumulated energy consumption in kWh.

Total costs

Display the total accumulated electricity costs in Euro.

Total water

Indication of the total water consumption in litres.

Note: The values are for information only and are not suitable for billing purposes.

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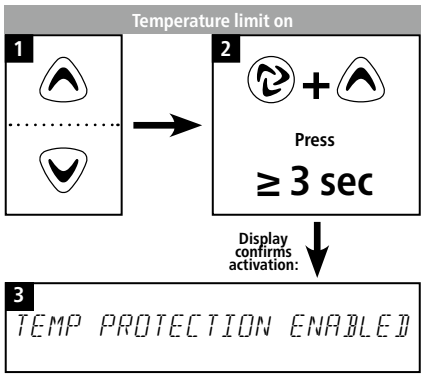


Temperature limitation

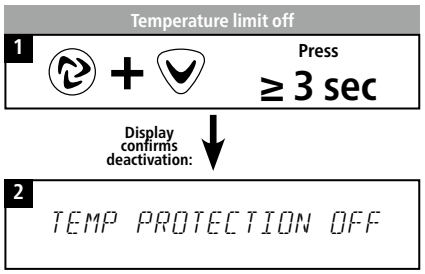
This instantaneous water heater is equipped with an optional temperature limiting function. This scalding protection is deactivated in the works setting.

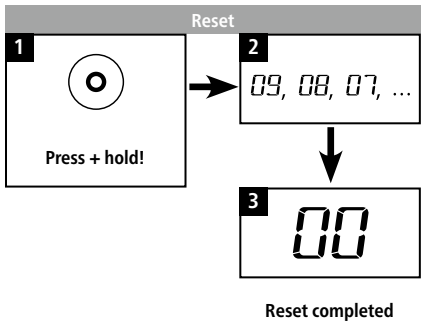
Switch on:

Select the limit temperature with arrow keys and , then press info key and arrow key simultaneously for at least 3 sec. The display briefly confirms the activation by "TEMP PROTECTION ENABLED".
After activation of the scalding protection it is impossible to select a higher temperature.

Switch off:

Press info key and arrow key simultaneously for at least 3 sec. The display briefly confirms the deactivation by "TEMP PROTECTION OFF".

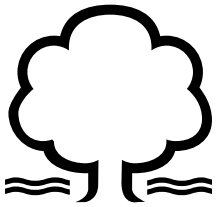




Reset to factory setting

All factory settings can be recalled:

- Press setup key , the display now counts backwards from " 10" to "00" in second intervals. The appliance is reset at value "00" – if you stop pressing the key earlier, the process will be cancelled.



How to save energy

Set the exact temperature you need on the appliance and open the hot water tap. Once you feel that the water is too hot, do not add any cold water and, instead, enter a lower temperature on the appliance. If you were to add cold water, the water already heated would cool down again and valuable energy would be wasted. Moreover, the cold water added in the tap is not covered by the control range of the electronic circuitry, with the result that temperature constancy is no longer guaranteed.

Power limit

If the full output of the instantaneous water heater DSX does not suffice to heat the tapped quantity of water, the control valve automatically reduces the flow rate so that the set temperature is reached.

Top-up heating

When operating with preheated water (e.g. with solar systems), you must ensure that the inlet temperature does not exceed 50 °C.

If the inlet temperature exceeds the setpoint, the appliance is not providing any output, and the display shows "INLET TEMP TOO HIGH".

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N.B. Maintenance work must only be carried out by a qualified tradesperson familiar with instantaneous water heaters.

Venting after maintenance work

This instantaneous water heater features an automatic air bubble protection to prevent it from inadvertently running dry. Nevertheless, the appliance must be vented before using it for the first time. Each time the appliance is emptied (e.g. after work on the plumbing system, if there is a risk of frost or following repair work), the appliance must be re-vented before it is used again.

1. Disconnect the instantaneous water heater from the mains (e.g. via deactivating the fuses).
2. Unscrew the jet regulator on the outlet fitting and open the cold water tap valve to rinse out the water pipe and avoid contaminating the appliance or the jet regulator.
3. Open and close the hot water tap until no more air emerges from the pipe and all air has been eliminated from the water heater.
4. Only then should you re-connect the power supply again (e.g. via activating the fuses) to the instantaneous water heater and screw the jet regulator back in.
5. The appliance activates the heater after approx. 10 seconds of continuous water flow.

Cleaning and maintenance

- Plastic surfaces and fittings should only be wiped with a damp cloth. Do not use abrasive or chlorine-based cleaning agents or solvents.
- For a good water supply, the outlet fittings (special tap aerators and shower heads) should be unscrewed and cleaned at regular intervals. Every three years, the electrical and plumbing components should be inspected by an authorised professional in order to ensure proper functioning and operational safety at all times.

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8. Troubleshooting and service

This instantaneous water heater was manufactured conscientiously and checked several times before delivery. First attempt to switch the house fuses off and on again in order to reset the electronics. Next, try to remedy the problem with reference to the following table. In doing so, you will avoid unnecessary expense of customer service assistance.

Repairs must only be carried out by authorised professionals.

If a fault in your appliance cannot be rectified with the aid of this table, please contact the service organisation of your importer or the Central Customer Service Department. Please have the details of the typeplate at hand.

Problem	Cause	Solution
Water stays cold, digital display does not light up	Master fuse tripped	Renew or activate fuse
	Safety pressure cut-out tripped	Contact customer service
Water stays cold, digital display does light up	Safety thermal cut-out tripped	Contact customer service
Display shows error symbol "wrench"	Control system has switched off	Switch fuses off and on. If symbol "screwdriver" is still indicated, contact customer service
Flow rate of hot water too weak	Outlet fitting dirty or calcified	Clean shower head, jet regulator or sieves
	Fine filter dirty or calcified	Let clean fine filter by customer service
Selected temperature is not reached	Water flow rate too high	(Re)activate motor-driven valve
	Cold water has been added via the tap	Tap hot water only; set temperature, check outlet temperature
Display: "INLET TEMP TOO HIGH"	Inlet temperature exceeding nominal temperature	Reduce inlet temperature
No response upon key press on device	Hood is not fitted properly	Let refit the hood properly by customer service

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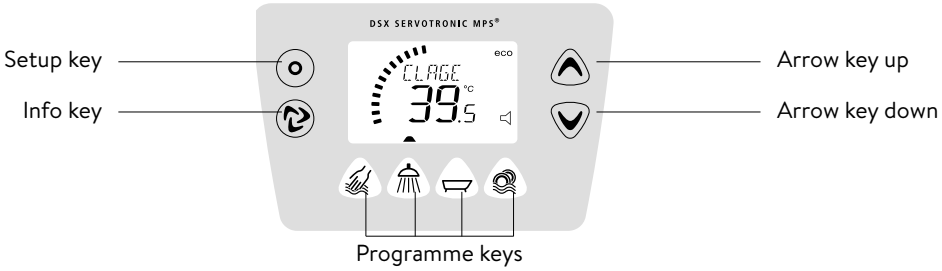
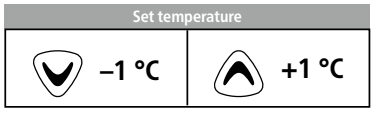
As Zip's policy is one of continuous product improvement, changes to specifications may be made without prior notice. Images in this booklet have been modified and may not be true representations of the finished goods.

WaterMark

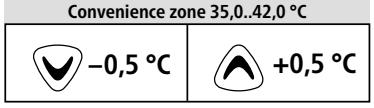
Quick reference guide



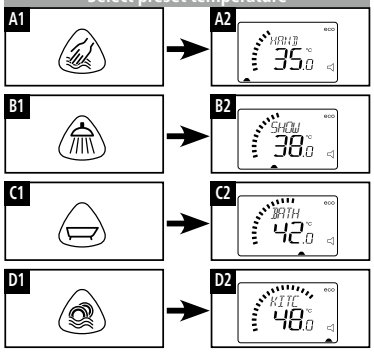
Set temperature



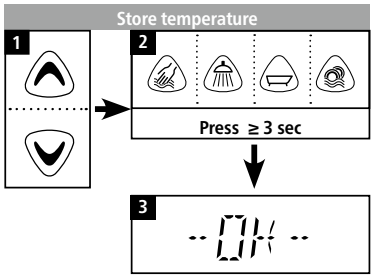
Convenience zone 35,0..42,0 °C



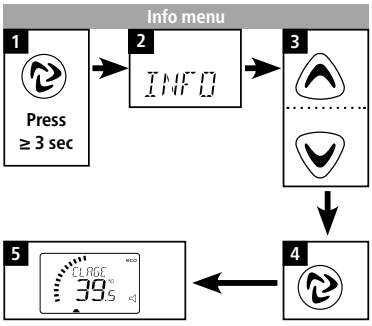
Select preset temperature



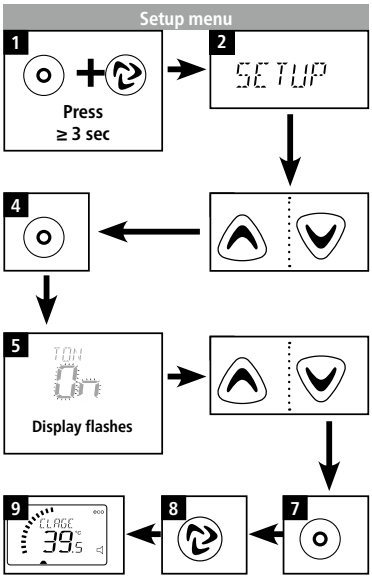
Store temperature



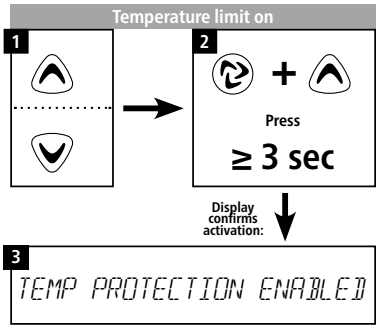
Info menu



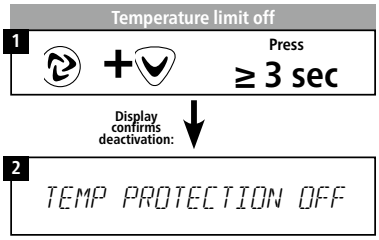
Setup menu



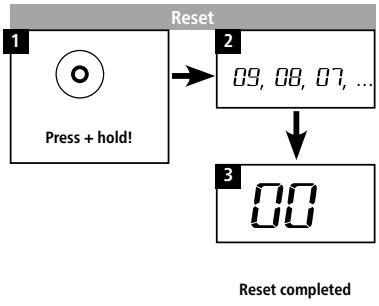
Temperature limit on



Temperature limit off



Reset



Instructions for User - DSX - 801049 - November 2018 v1.00 Art.no: 9120-34371

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