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Operating Instructions

ATR 4500

ATR 4800

GB

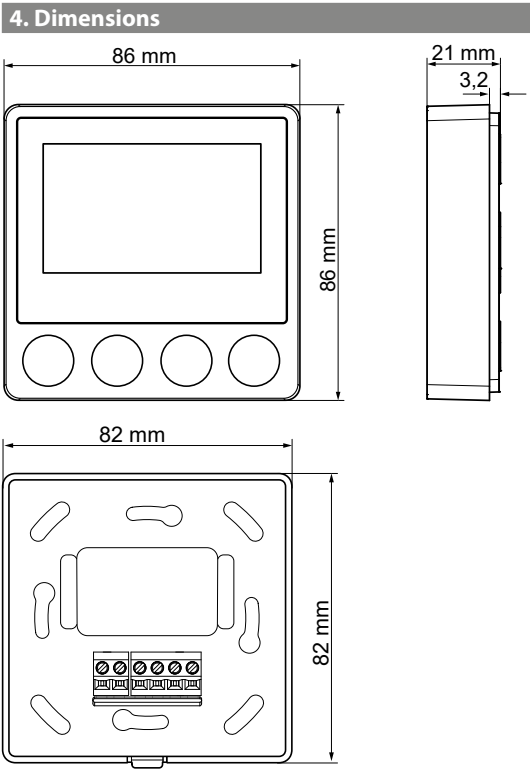
Important!

The device may only be opened by an electrically skilled person and must be installed as shown on the circuit diagram on the device and in these instructions. The existing safety regulations must be followed.

The relevant installation measures must be taken to achieve the requirements of protection class II. This independently mountable electronic device is used to control the temperature in dry and enclosed rooms only, with normal environment. This device conforms to EN 60730, it operates according to type 1Y.

1. Areas of Use
- The electronic temperature controllers ATR 4500/4800 can be used to control the floor and room temperature. The products are suitable for water-based and (with usage of external contactor/relay) for electric heating systems.
- This control has the following control functions:
TW (1/2/0/0/5/0/0/8)
2. Installation site
- The controller should be mounted in a place in the room that is easy to access for operation.
 - Mounting height: approx. 1.5 m above the floor.
 - Preference should be given to installation on an internal wall. Avoid external walls and draughts from windows and doors.
 - Ensure that the room's normal convection air reaches the controller freely without restriction. The controller should therefore not be mounted inside shelf units or behind curtains and similar coverings.
 - Extraneous heat has a negative influence on the control accuracy.
 - Direct sunshine, proximity to televisions, radios and heaters, lamps, stoves and heating pipes must be avoided.

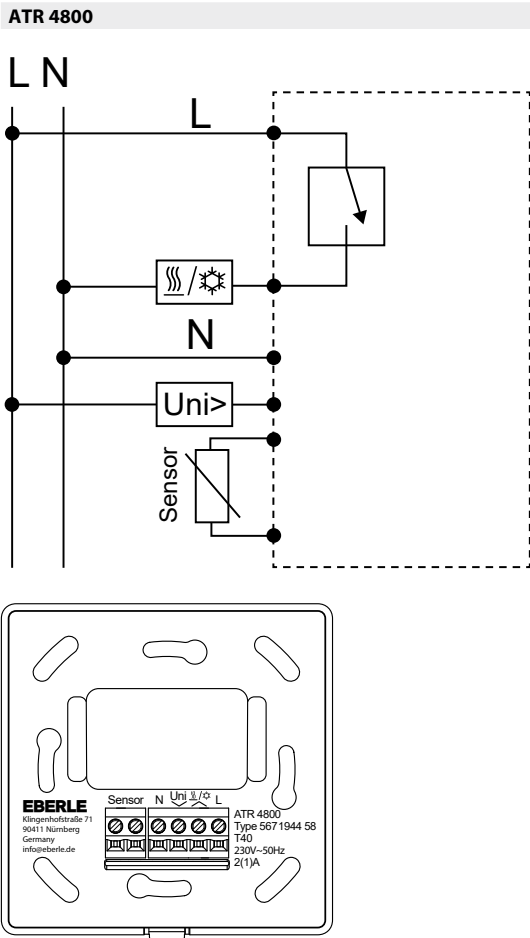
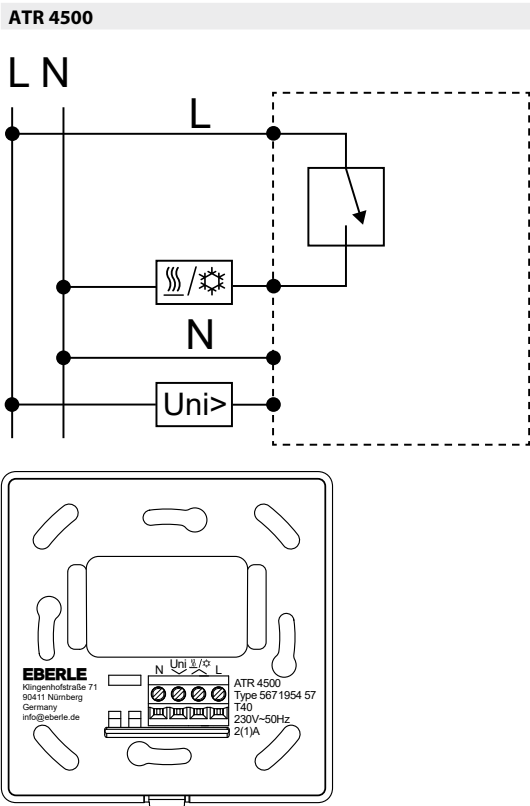
3. Electrical connection / mounting
- Installation in the following steps:
1. Connect the backplate terminals according to the circuit diagram (see laser marking on backplate or these instructions)
 2. Snap the front part onto the backplate



5. Wiring diagrams
- Abbreviations**
- L = outer conductor (phase)
- N = neutral conductor
- Uni = Universal input (H/C | setback | presence)
- 🔥 = Heating load connection
- 🔥/❄️ = Heating / Cooling load connection

Attention ⚠️

Risk of fatal injury, due to electric shock. The appliance is not safety extra-low voltage device (SELV). The sensor cables are connected to 230V AC mains voltage. Only use sensors with insulated cables. Failure to do so may result in serious injury or death.



6. Technical data

	ATR 4500	ATR 4800
Article number	567 1954 57 600	567 1944 58 600
Supply voltage	230 V AC, 50 Hz	230 V AC, 50 Hz
Temperature setting range	5 ... 30 °C	5 ... 30 °C 10 ... 40 °C
Output	Triac	Triac
No of switchable actuators	6 thermal actuators – 3 W each (18 W)	6 thermal actuators – 3 W each (18 W)
Display	PMVA black with backlight	PMVA black with backlight
Stand-by consumption < 0,5 W		< 0,5 W
Control algorithm	PWM or ON/OFF selectable	PWM or ON/OFF selectable
PWM cycle time	5.. 20 min selectable	5.. 20 min selectable
Hysteresis	0,1 K or 0,5 K selectable	0,1 K or 0,5 K selectable
Universal input	Heating/ Cooling Change-over or Setback or Presence selectable	Heating/ Cooling Change-over or Setback or Presence selectable
Frost protection	5 °C	5 °C 10 °C for floor control
Valve protection	Duration and timing adjustable	Duration and timing adjustable
EN 50559 temp. limit	5 min / 60 min if activated	5 min / 60 min if activated
Floor probe	–	Example: F 193 720, NTC, Length 4 m, Max. extension: 50 m Probe value selectable via menu
Setpoint range limitation	Via user menu	Via user menu
Window open detection	Temp. drop & duration adjustable via menu	Temp. drop & duration adjustable via menu
Heating schedules	Timer	Auto / Holiday / @Home / Timer
Parametrization	Installer & User menu directly at device	Installer & User menu directly at device
Ambient temperature	0 ... 40 °C	0 ... 40 °C
Storage temperature	–25 ... 60 °C	–25 ... 60 °C
Overvoltage category	III	III
Rated pulse voltage	4 kV	4 kV
Voltage / current for EMC emission testing	230 V, 0.1A	230 V, 0.1A
Protection class w/ appropriate installation measures	II	II
Degree of protection	IP 30	IP 30
Pollution degree	2	2
Temperature ball intendation test	75 °C	75 °C
Energy class (acc. EU 811/2013)	IV = 2 %	IV = 2 %
Eco design directive LOT 20	F(x) correction parameters upon request	F(x) correction parameters upon request

7. Universal input

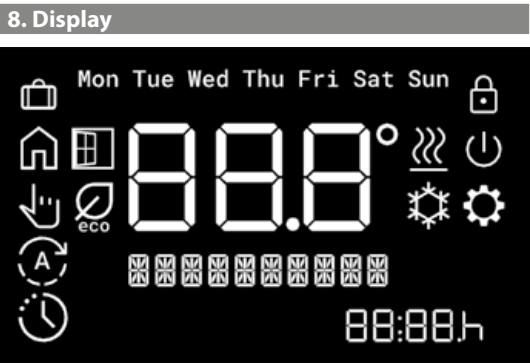
The function of the universal input can be set in the Installer Menu (Heating/Cooling change-over OR Setback OR Presence)

When the H/C input is energized (230V), the device switches to Cooling Mode.

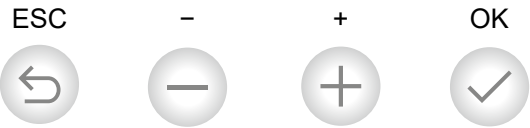
When the setback input is energized (230V), the device switches to Unoccupied Mode (Unoccupied temperature is settable via User Menu).

When the presence input is energized (230V), the controller switches to Occupied Mode.

AUTO/HOLIDAY/@HOME/TIMER selections are ignored while the device is in Unoccupied Mode.



88.8°C	Measured Temperature
Mon Tue Wed Thu Fri Sat Sun	Day of the week (ATR 4800)
88:88h	Current time (ATR 4800) or TIMER duration
🔥🔥🔥🔥🔥🔥	Text line
🔥 Heating	🏠 At home
❄️ Cooling	👉 Manual
🔒 Lock mode	🔄 Auto
🔌 Off mode	🕒 Timer
⚙️ Settings	🪟 Window open
🧳 Holiday	🌿 Eco Mode



9. Normal Operation

Change setpoint with [+] or [-]

Press [Esc] or [OK] for mode selection, info and menu entry

Scroll with [+] or [-]

INFO	Scroll with [+] / [-] through the displayed options: Next upcoming event Holiday start Holiday end AUTO schedule AT HOME schedule
AUTO	Start AUTO mode, weekly schedule set under User Menu 2, item 01 is applied
MANUAL	Manual operation, setpoint change via [+] or [-], no schedules active
AT HOME	Start AT HOME mode, schedule for the day set under User Menu 2, item 02 is applied
TIMER	Selected setpoint is applied for selected timer duration, once time expired, device goes back to previous mode and latest specified setpoint before timer was started
MENU	Entry for User Menu Level 1, User Menu Level 2 and Installer Menu

Manual override

Even during a currently active mode/schedule or absence mode, the setpoint can be changed manually at any time using [+] / [-].

The manually changed setpoint value remains active until the next event occurs. Example: In AUTO mode, the manually changed setpoint value remains active until the next timed event of the AUTO schedule. From the next event onwards, the AUTO schedule continues to be applied as defined.

Manual override is indicated by the hand symbol in addition to the active mode symbol.

10. Installer Presets (depending on application)

Selection after first start of device or via menu

	Use case / Heating system	ATR 4500	ATR 4800
P2	Hydronic Underfloor Heating – Room	●	●
P3	Hydronic Radiator – Room	●	●
P4	Blow convector – Room (Attention: Use only with external relay)	●	●
P5	Electrical Radiator, Infrared – Room (Attention: Use only with external relay)	●	●
P6	Hydronic Underfloor Heating – Limiter	–	●
P7	Electrical Underfloor heating – Floor (Attention: Use only with external relay)	–	●
P8	Electrical Underfloor Heating – Limiter (Attention: Use only with external relay)	–	●

	Function description	P2	P3	P4	P5	P6	P7	P8
02	Application type (Control sensor)	Room sensor	Room sensor	Room sensor	Room sensor	Room sensor with floor limit	Floor probe	Room sensor with floor limit
03	Floor probe type (resistance in Ohm)	–	–	–	–	33 k	33 k	33 k
04	Min. floor limit in °C	–	–	–	–	10	10	10
05	Max. floor limit in °C	–	–	–	–	40	40	40
06	Control method 2 point control: On/Off time in min	PWM 20 Min –	PWM 10 Min –	2 point control 0,5 K 2	2 point control 0,5 K 2	PWM 20 Min –	PWM 5 Min –	2 point control 0,5 K 2
07	Actuator type	Normally closed valve	Normally closed valve	–	–	Normally closed valve	–	–
08	Universal input configuration	Heating/Cooling	Heating/Cooling	Setback input	Setback input	Heating/Cooling	Setback input	Setback input
09	Optimum Start	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Valve protection Valve protection – Max. idle time in days Valve protection – Min. exercise time in min	Yes 14 3	Yes 14 3	No – –	No – –	Yes 14 3	No – –	No – –
11	Temporal limit acc. to EN 50559	No	No	No	Yes	No	Yes	Yes
12	Window open detection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	Frost protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes

11. Menu

User Settings Menu level 1

User Menu item	Function description	Options	Default values	ATR 4500	ATR 4800
01	HOLIDAY settings	Delete holiday – once upcoming holiday has been specified Set temp with start and end date	–	–	●
02	Heating OFF	No – Cancel and return Yes – Output always off	No	●	●
03	Key lock To disable press [OK] & [ESC] for 5 s	No – Cancel and return YES – Press and hold the [OK] button to confirm. – Any button press without effect	No	●	●
04	Access protection To disable press [OK] & [ESC] for 5 s	No – Cancel and return YES – Press and hold the [OK] button to confirm, manual setpoint change only (no menu access)	No	●	●
05	On time of load	h/week – display of how many hours per week the load has been active h/30 days – display of how many hours per 30 days the load has been active h/year – display of how many hours per year the load has been active	–	–	●
06	Display brightness in idle Device goes to idle after 60 s without button-press	0%, 10 %, 25 %, 50 %, 75 %, 100 %	0%	●	●
07	Unoccupied Setpoint (Heating only)	min. setpoint ... max. setpoint	18	●	●

User Settings Menu level 2

User Menu item	Function description	Options	Default values	ATR 4500	ATR 4800
01	AUTO settings	Change existing schedule – only available once a schedule has been specified Preset 1 – Weekly heating program @work 5 days/week Preset 2 – Weekly heating program @home Custom – creation of weekly program from scratch – 6 events/day – Definition of time and target value per event – If there are fewer than six events per day: after the time 23:50, the entry ‘---:’ appears. This entry deletes the current and all subsequent events of the day and triggers a jump to the next day	–	–	●
02	AT HOME settings	Specification of schedule for 1 day – max 6 events (temperature & time)	–	–	●
03	Min. setpoint	5 ... 29 °C (room control range) 10 ... 39 °C (floor control range)	room: 5 °C floor: 10 °C	●	●
04	Max. setpoint	6 ... 30 °C (room control range) 11 ... 40 °C (floor control range)	room: 30 °C floor: 40 °C	●	●
06	Room sensor correction	–5.0 ... +5.0 K	0 K	●	●
07	Clock Setting	Year → month → day → time	–	–	●
08	Auto daylight saving time	No – disable Yes – enable auto daylight saving time	Yes	–	●
09	Language	German, English, French, Italian	German	●	●
10	Firmware info	Firmware version		●	●
88	Reset User data	No: Cancel and return Yes: Long hold [OK] to confirm	No	●	●

Installer Settings

Access Code for Installer settings: 32

Code Validity: 5 min after first entry

Default values depending on selected preset (see overview presets)

Menu item	Function description	Options	ATR 4500	ATR 4800
01	Preset selection	Preset 02 Hydronic UFH – Room Preset 04 Blow Convector – Room Preset 06 Hydronic UFH – Limiter Preset 08 Electrical UFH – Limiter Preset 03 Hydronic Radiator – Room Preset 05 Electrical Radiator, Infrared – Room Preset 07 Electrical UFH – Floor	●	●
02	Application type (control sensor)	ROOM – Room sensor (internal) FLOOR – Floor probe (external) LIMITER – Room sensor with floor limit	–	●
03	Floor probe type	No – No floor probe fitted 2 kOhm, 10 kOhm, 12 kOhm, 15 kOhm, 33 kOhm	–	●
04	Min. floor limit in °C	10 ... 39	–	●
05	Max. floor limit in °C	11 ... 40	–	●
06	Control method	PWM → 20 min, 15 min, 10 min, 5 min 2 point control → 0.5 K Hysteresis → ON/Off time 1 ... 10 min 0.1 K Hysteresis	●	●
07	Actuator type	nC: normally closed valves no: normally open valves	●	●
08	Universal input configuration	HEAT/COOL – Automatic Heat/Cool changeover depending on input status HEAT ONLY – Output off in Cool Mode SETBACK – Unoccupied Mode when input is energized PRESENCE – Unoccupied Mode when input is de-energized DEACTIVATE – Ignore input signals	●	●
09	Optimum start	No – disable YES – enable optimum start (Heating/Cooling will start in adaptive way to have reached demanded temperature at specified event time	–	●
10	Valve protection	No – Disable YES – Enable → Max. idle time: 0...14 days → Min exercise time: 0 ... 10 min	●	●
11	Temporal limit acc. to ENS0559	No – Disable YES – Enable (5 Min off time per hour)	●	●
12	Window open detection	No – Disable YES – Enable → WOD Threshold 0.1 ... 5.0 K → WOD Guard period: 0 ... 9 min → WOD → event duration: 10 ... 90 min	●	●
13	Frost protection	No – Disable YES – Enable (Min temp: 5 °C ROOM/LIMITER, Min temp: 10 °C FLOOR)	●	●
99	Ex-factory reset	No – Cancel & go back YES – Long hold [OK] to confirm	●	●

12 AUTO Schedule Presets

Preset 1 – At work 5 days / week

Monday – Thursday				
Event	1	2	3	4
Time	06h00	08h30	17h00	22h00
Temperature	21,5 °C	19,0 °C	21,5 °C	18,0 °C

Friday

Event	1	2	3	4
Time	06h00	08h30	17h00	23h00
Sollwert	21,5 °C	19,0 °C	21,5 °C	18,0 °C

Saturday			Sunday	
Event	1	2	1	2
Time	08h00	23h00	08h00	22h00
Temperature	21,5°C	18,0°C	21,5°C	18,0°C

Preset 2 – At home 7 days/week

Monday – Thursday			Friday	
Event	1	2	1	2
Time	06h00	22h00	06h00	23h00
Temperature	21,5°C	18,0°C	21,5°C	18,0°C

Saturday			Sunday	
Event	1	2	1	2
Time	08h00	23h00	08h00	22h00
Temperature	21,5°C	18,0°C	21,5°C	18,0°C

13 Error indication

The device indicates a temperature sensor error as follows.



In case of the error indication, please check the proper functioning of the connected probe.

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This product should not be disposed of with household waste. Please recycle the products where facilities for electronic waste exist. Check with your local authorities for recycling advice.