ComfortHeat
Hydronic & Electric Floor Heating Systems

ETN4 MANUAL - ELECTRIC

A Comfort Heat floor heating system has been installed in your floor. Floor heating warms from the ground up providing an unparalleled feeling of comfort. This heating system is controlled by an electronic thermostat and floor sensor for optimum temperature control and efficiency.

ETN4 DETAILS

The ETN4 thermostat is a home automation compatible thermostat. Mounted in the switch board (DIN rail), it utilises a **setback temperature** function. During the setback periods, the floor does not turn OFF but programs the floor temperature to a lower temperature.

PRIOR TO TURNING ON

Concrete slabs, screeds and glue must be fully cured before turning the heating system on. Wait at least 3 weeks and when turning on for the first time, increase the floor temperature gradually over 2-3 days.

Under carpet and timber systems can be turned on once installation is complete.

CABLE WARRANTY & TEMPERATURE SETTINGS [FLOOR SENSING]

AREAS	TILE [BATH]	TILE [LARGE AREA]	INSLAB	CARPET	TIMBER
SUGGESTED FLOOR TEMP.	24-28°C	21-22°C	21°C	19-21°C	24°C
CABLE WARRANTY	10 years	10 years	10 years	5 years	5 years

TECHNICAL DATA - ETN4

Supply Voltage :	240V AC, 50/60hz
Output Relay :	16A SPST, 3600W max
Switching Differential :	0.4 degC
Built-in Switch :	2 pole 16A
Default Temp Range :	0/+40 degC
Housing/protection :	IP20
Dimensions (HxWxD) :	86mm x 52mm x 58mm
Mounted :	Vertical/DIN rail mounted
Thermostat Warranty :	2 years

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ETN4 OPERATION SETTINGS

TURNING ON

> Slide ON the ON/OFF switch
> Press right(up) and left(down) button to set the desired floor **set point temperature.**

The thermostat screen is set to always display the **set point temperature** and not the current running temperature.
The 3 heating squiggles to the right of the temperature will turn on when the floor is heating.

SETTING PARAMETER VALUES

Parameter settings allows you to set a range of values to define heating options and temperatures.
See the ETN4 included manual to view the full range of parameter options. Most default values need no adjustment.
Below setting is one option you should adjust to suit;

Night Setback / Energy Saving Function
> Press and hold programming button [centre] for 3 seconds.
> Press programming button repeatedly until you view parameters **nSb / -5.0**
> Arrow right[up] and left[down] to adjust the **setback temperature** differential.

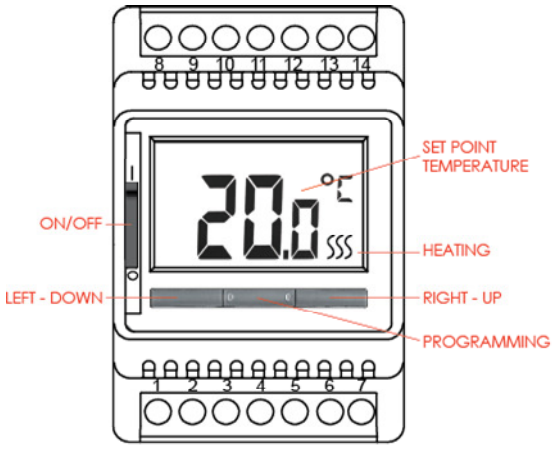
This is your **setback temperature**. The vale is a differential value based off your **set point temperature.**
A suggested set back temperature would be 5 degC if you did not want the floor heating to turn on, as it is unlikely your floor temperature will drop below this temperature.

Example of suggested tiled bathroom setting;
Set point temperature 25 degC
Setback temperature -20.0 degC

If no button is pressed after 30 seconds the thermostat returns to the home screen.
The timer to activate the setback temperature is controlled by an external signal. See figure 1a.

CHILD LOCK

Allows thermostats in public places to be locked.
> Press and hold the left and right buttons simultaneously for 10 seconds. A symbol on the screen indicates the thermostat is locked.
> Press and hold the left and right buttons simultaneously for 10 seconds to release the child lock.



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Programming your floor heating schedule is a completely individual decision based on your lifestyle and personal preferences. Our recommended times and temperatures are a guide only based on popular settings.

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RUNNING GUIDELINES – ELECTRIC

In-slab heating systems have a large thermal mass and the ability to store heat for long periods of time. Heating slabs during off-peak times is a cost efficient heating option. Time of use electricity rates allow you to programme the ETN4 via your home automation system to heat during low cost times and based on the thermal mass of the slab, create an all day warmth. If heating during off peak times only is not enough, you can top up the slab temperature during shoulder rate periods too. Check with your electricity provider for your time of use rates and times. **In-slab** installations can also be programmed via automation systems to have the 'power cut' instead of switching to a setback temperature.

Under tile [in-screed & thin-mat] installations typically heat up in around 1-2 hrs. Screeds will retain the heat for some time but heating during off peak times only is not suitable. Based on your time of use electricity rates, you can heat during off peak and shoulder rate times only, and by keeping doors closed and windows shut, retain the warmth for an efficient and comfortable room temperature.

Another popular option when programming **under-tile** heating is to run it only when at home, for a few hours in the morning and a few hours at night, at any electricity rate, based on your comfort temperature and lifestyle.

Under carpet & timber mats warm in around 15 mins and are best programmed to turn on when at home, based on your comfort level and lifestyle.

THERMOSTAT HEATING SCHEDULE GUIDES

IN-SLAB AREAS - SAME TIME EVERY DAY DURING OFF PEAK TIMES ONLY WITH ONE HEAT CYCLE [GUIDE ONLY]

** Off-peak times are based on Energy Australia NSW 'Time of Use' rates 2020. Please check with your energy provider for your local time

> Turn ON ETN4
> Adjust temperature using up[right] and down[left] button to 21°C.
> Press and hold programming button [centre] for 3 seconds.
> Press programming button repeatedly until you view parameters **nSb /**
> Adjust this parameters using up[right] and down[left] button to -16°C.

> Schedule 1 - 5°C @ 7.00** [setback temperature]
> Schedule 2 - 21°C @ 22.00** [set point temperature]

BATHROOMS - SAME TIME EVERY DAY WITH TWO HEAT CYCLES [GUIDE ONLY]

Thermostat Settings - Set point temperature value 25°C / Set back parameters nSb value -8°C

> Schedule 1 - 25°C @ 5.30 [set point temperature]
> Schedule 2 - 17°C @ 8.30 [setback temperature]
> Schedule 3 - 25°C @ 17.00 [set point temperature]
> Schedule 4 - 17°C @ 22.00 [setback temperature]

LARGE TILED AREAS [SCREED/THIN] - SAME TIME EVERY DAY WITH TWO HEAT CYCLES [GUIDE ONLY]

Thermostat Settings - Set point temperature value 22°C / Set back parameters nSb value -17°C

> Schedule 1 - 22°C @ 5.30 [set point temperature]
> Schedule 2 - 5°C @ 8.00 [setback temperature]
> Schedule 3 - 22°C @ 17.00 [set point temperature]
> Schedule 4 - 5°C @ 21.00 [setback temperature]

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WIRING DIAGRAM

Fig.1 / Abb.1 / Рис.1

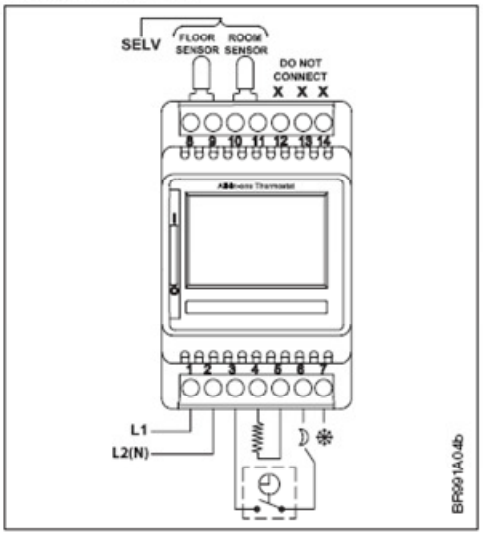

Fig.1a / Abb.1a / Рис.1a

TROUBLE SHOOTING

If an error message occurs, the thermostat will display one of the following errors;

E0 : Internal failure. The thermostat is defective. The thermostat must be replaced.

E1 : Internal room sensor defective or short-circuited. The thermostat must be replaced.

E2 : External floor sensor disconnected, defective or short-circuited. Requires sensor reconnection or replacement.

E5 : Internal overheating. Installation requires inspectIon.

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