ComfortHeat
Hydronic & Electric Floor Heating Systems

ETN4 MANUAL - HYDRONIC

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) and 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

Slab or Under Tile – Concrete, screeds and tile glues must be fully cured before turning the heating on. For concrete and screeds, wait at least 3 weeks before turning on. When turning on the floor heating for the first time, increase the floor temperature gradually over 2-3 days.
Under Carpet and Timber – Can be turned on once installation is complete.

SUGGESTED TEMPERATURES

AREAS	SLAB/TILE/CARPET FLOORING	TIMBER FLOORING	RADIATORS
SUGGESTED FLOOR TEMP.	21-24°C	24°C max.	
SUGGESTED AIR TEMP.			NA

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.

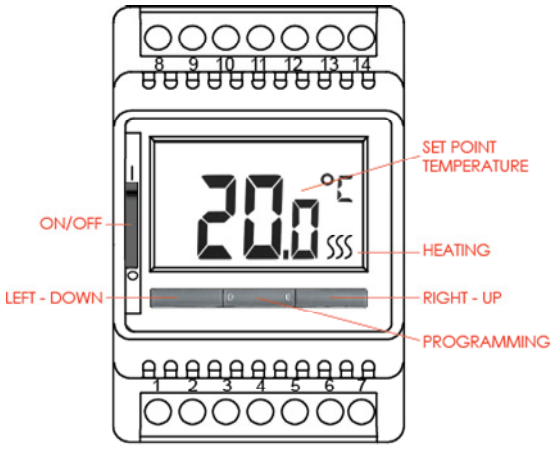
This is your **setback temperature**. The vale is a differential value based off your **set point temperature.**
A suggested set back temperature would be 5 degC if you did not want the floor heating to turn on, as it is unlikely your floor temperature will drop below this temperature.

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.



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 – HYDRONIC

Gas systems are ideal for on-demand heat. Gas boilers are efficient any time of day, quiet to run and billed at a flat rate.

Heat Pump systems are at the fore-front of hydronic heating and can be highly cost efficient to run. Heat pumps require a range of considerations when running for example, the location, appropriate time of use and efficient times to run.

In-Slab installations are typically large and have excellent thermal mass. Initially, the slab may take a few days to warm and then only requires to be topped up to create an all day warmth. Allow 2-4 hours for the slab to top up.

In-Screed installations typically heat up in around 2-3 hrs depending on the screed thickness. Screeds will retain the heat for a few hour and by keeping doors closed and windows shut, retain the warmth for an efficient and comfortable room temperature. Programme the in-screed heating to run when at home, based on your lifestyle.

Under-Timber installations warm the small air space below the timber allowing this warmth to gently rise into the room. Under timber heating has a maximum temperature limit and may require supplemental heating to warm the room.

Radiator systems are not suitable with a ETN4 as they offer no air sensing control.

THERMOSTAT HEATING SCHEDULE GUIDES

To set up the ETN 4 thermostat press ;
> Turn ON thermostat
> Adjust temperature using up[right] & down[left] button to **[set point temperature];** see below temperatures as a guide.
> 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 **= [set point temperature] – [setback temperature]**
[This value is a negative number and the differential value]

IN-SLAB AREAS [GAS] - SAME TIME EVERY DAY ANY TIME OF DAY WITH TWO HEAT CYCLES [GUIDE ONLY]

Thermostat Settings - Set point temperature value 21°C / Set back parameters nSb value -11°C

> Schedule 1 - 21°C @ 3.00 [set point temperature]
> Schedule 2 - 10°C @ 7.00 [setback temperature]
> Schedule 3 - 21°C @ 16.00 [set point temperature]
> Schedule 4 - 10°C @ 20.00 [setback temperature]

IN-SLAB AREAS [HEAT PUMP] - SAME TIME EVERY DAY WITH TWO HEAT CYCLES[OFF PEAK AND SHOULDER TIMES ONLY] [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 times.

Thermostat Settings - Set point temperature value 21°C / Set back parameters nSb value -16°C

> Schedule 1 - 21°C @ 7.00 [set point temperature]
> Schedule 2 - 5°C @ 14.00 [setback temperature]
> Schedule 3 - 21°C @ 20.00 [set point temperature]
> Schedule 4 - 5°C @ 22.00 [setback temperature]

IN-SCREED AREAS [GAS]] - SAME TIME EVERY DAY ANY TIME OF DAY WITH TWO HEAT CYCLES [GUIDE ONLY]

Thermostat Settings - Set point temperature value 21°C / Set back parameters nSb value -11°C

> Schedule 1 - 21°C @ 5.00
> Schedule 2 - 10°C @ 8.00
> Schedule 3 - 21°C @ 15.00
> Schedule 4 - 10°C @ 22.00

IN-SCREED AREAS [HEAT PUMP] - SAME TIME EVERY DAY ANY TIME OF DAY WITH TWO HEAT CYCLES [GUIDE ONLY]

Thermostat Settings - Set point temperature value 21°C / Set back parameters nSb value -11°C

> Schedule 1 - 21°C @ 7.00
> Schedule 2 - 10°C @ 10.00
> Schedule 3 - 21°C @ 13.00
> Schedule 4 - 10°C @ 20.00

WIRING DIAGRAM

Fig.1 / Abb.1 / Рис.1

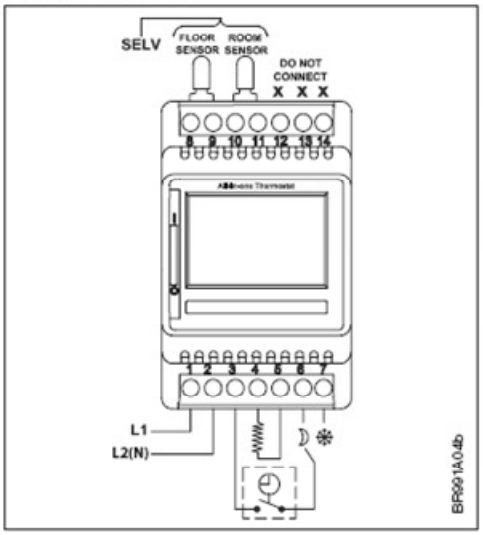

Fig.1a / Abb.1a / Рис.1a

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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