

INSTALLING THERMOSTAT FLOOR PROBES

Floor probes enable control of the floor temperature in an underfloor heating system. This is important as the mass of the floor is large and slow to react to the occupant requirements. Floor coverings and thickness of the slab or screed exacerbate this lag.

Also, in NZ, we don't have consistently cold weather and we do have high heatloss houses with large glazing. This is different to what weather and homes are like in Europe and North America where they can often successfully use only air sensing thermostats.

Therefore, CHNZ's approach to control is that if we are heating the floor we need to control the floor. We are trying to avoid temperature lag and overshoot to produce the best comfort.

Positioning of Floor Probes

The controls come with a sensor length of around 2.5 metres and a diameter of 5mm at the sensor tip.

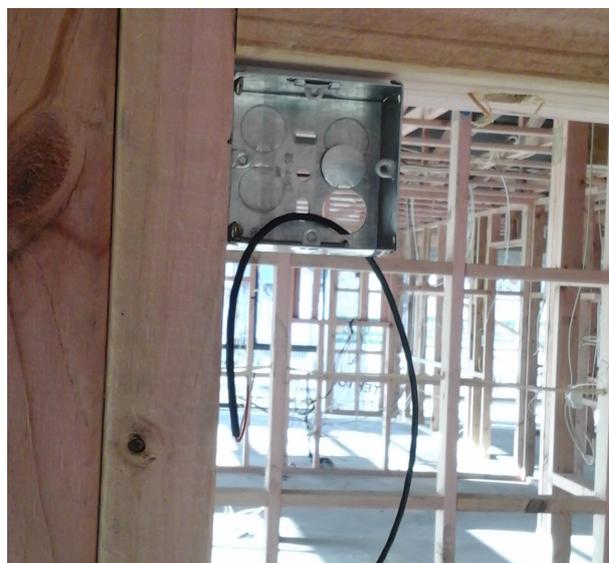
The sensor should be inserted in a conduit to enable replacement at a later date if required, Not installed directly into the concrete floor. 16mm underfloor pipe is suitable for this conduit. The conduit is attached within the slab or screed before the concrete is laid and should be situated evenly between two of the underfloor pipes and run in the same direction as the uf pipes if possible. The end of the conduit that is in the slab should be covered with tape to prevent concrete entering.



The picture below shows the conduit attached between the underfloor pipes and rising where the timber framing will be.



The conduit needs to rise in the wall to the thermostat position or to where an inspection box can be situated.



Probe Installed in Screed Floor

If the floor probe is for a screed floor, the conduit will need to be cut into the poly under the closest pipe to the wall to be able to sit between it and the second pipe.



Whilst floor probes have been installed by grinding a slot into the surface of the concrete slab, this really is not a great solution as it is difficult to replace if the sensor fails. Also there is the risk of grinding through an underfloor pipe that is close to the surface. We do not ever grind or cut a chase in concrete floors to fit a floor probe, irrespective of what the floor finish will be.

The picture to the right is not a good solution.



If a building has had the conduits cut off, damaged or are not installed within the wall cavity, this needs to be raised with the project manager immediately and a record of the conversation kept.

The communication is that an air sensing thermostat will be installed for that zone or area. It should also state that the impact of this is that the system will not be as efficient and they are to be encouraged to talk to the home owner about this.

Extending Floor Probes

To extend the probes to the maximum 20m please use screened twisted pair cable and avoid long runs parallel to mains cable to avoid picking up stray voltages.