

UNDERFLOOR HEATING CONTROL WITH ADDITIONAL HEAT



ROOM CONTROLLER

- Switch On/Off both thermostats
- Setpoint
- Mode
- Fan Speed
- Auto/manual Fan
- Internal Temperature Probes

INSTALLATION CONFIGURATION

- Floor heating system that, due to its big inertia, when the difference between actual temperature and setpoint is greater than 1,5 °C, a fancoil is turned on as support heating system to achieve a faster approach to the setpoint.
- Fancoil can work independently in cooling mode or heating mode
- In heating mode, if the Fancoil is on and the radiant floor is activated, Fancoil will turn off until additional heat is activated. If radiant floor is activated, and then, we turn on the Fancoil, both can work simultaneously.

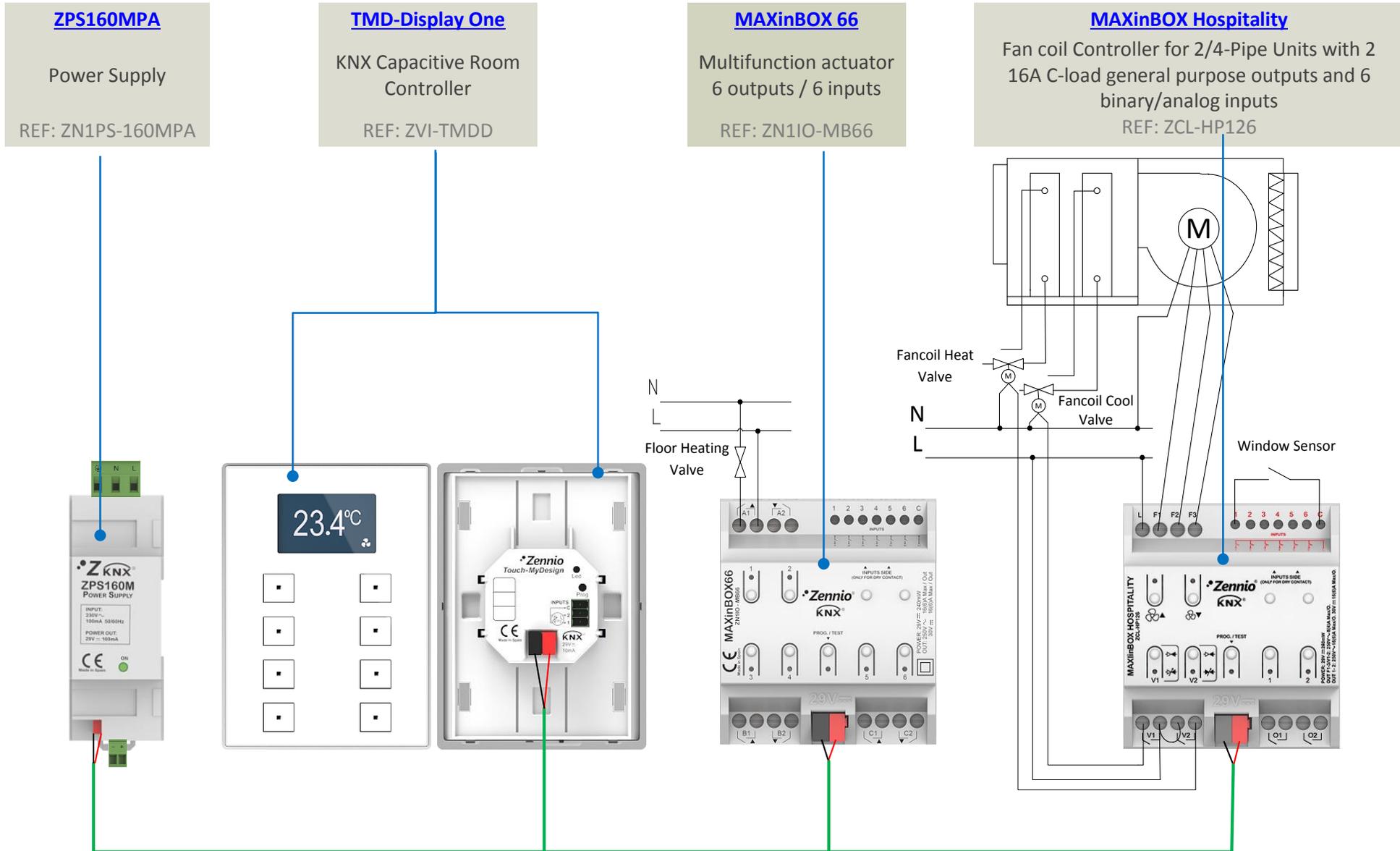
THERMOSTATIC CONTROL

- Control: PI control - Continuous – Fancoil (PI cycle of 15 minutes)
- Control: PI control - PWM – Radiant floor (PI cycle of 50 minutes)

IMPORTANT: When checking ETS Project activating the option “! Show changes” on parameter tab the symbol “!” will appear showing the modified parameters on ETS.



NEEDED DEVICES AND WIRING DIAGRAM

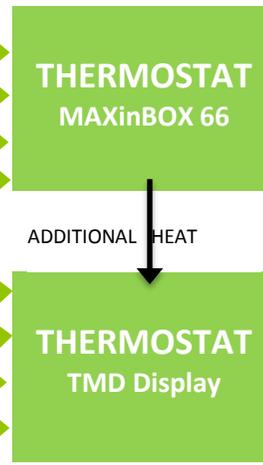


KNX COMMUNICATION OBJECTS

ROOM CONTROLLER



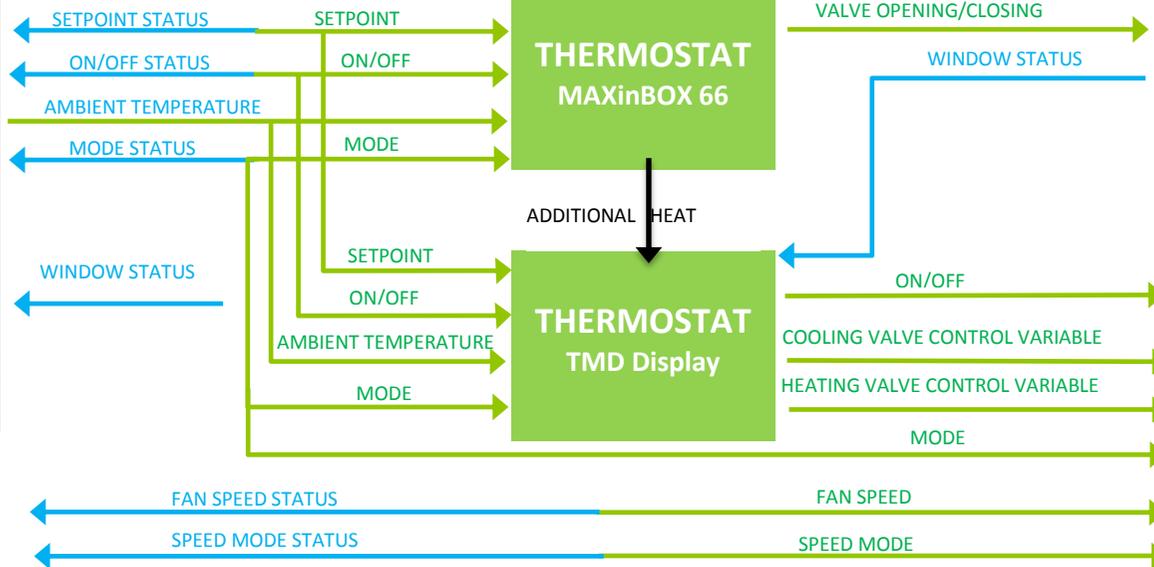
THERMOSTAT



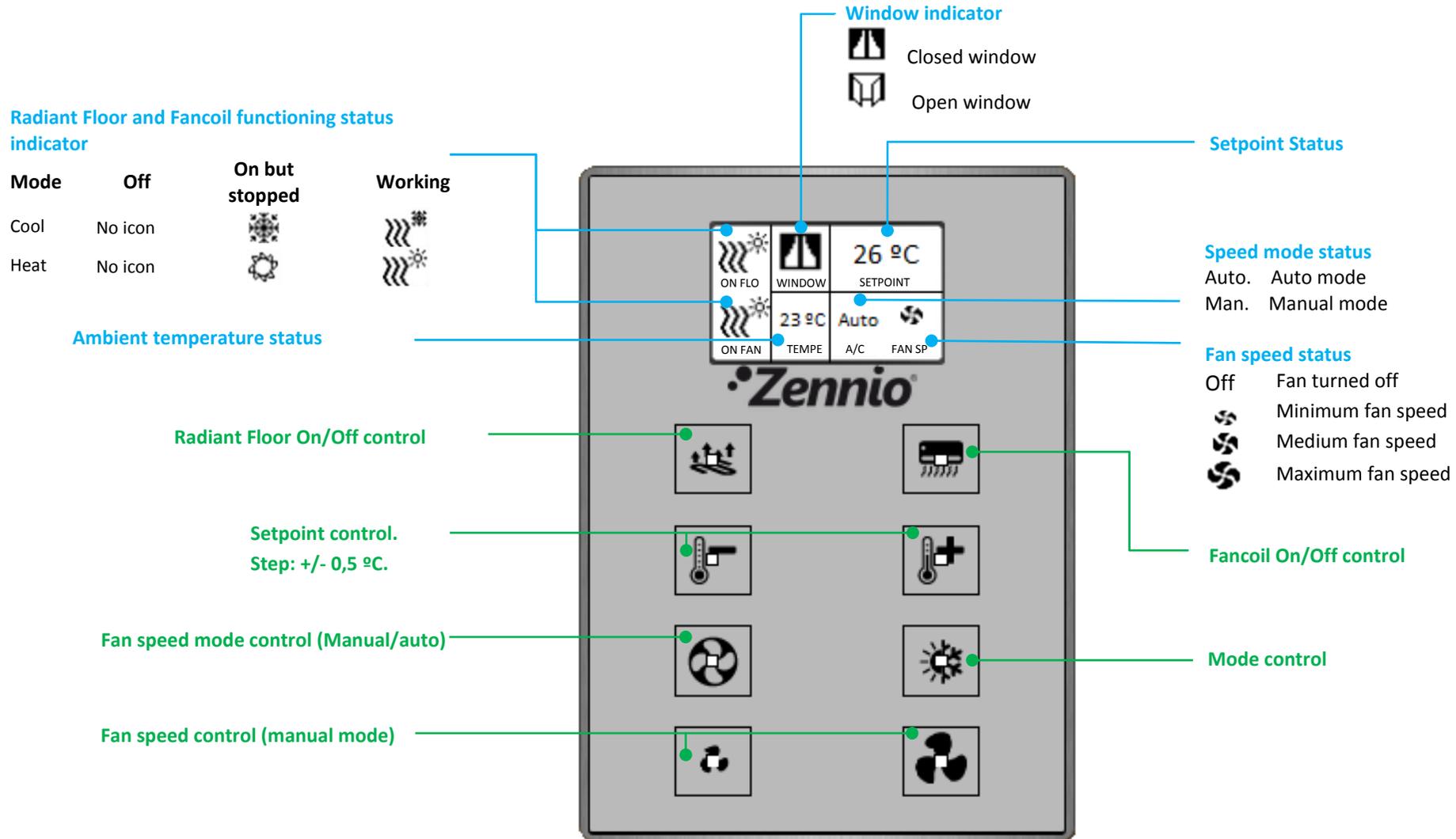
FLOOR HEATING CONTROLLER



FANCOIL CONTROLLER



ROOM CONTROLLER



ALTERNATIVE PRODUCTS

Note: Notice that two thermostatic controls are required per zone with this configuration. It's possible to use [QUAD](#) as additional thermostats module.

ROOM CONTROLLER ALTERNATIVES



InZennio Z41 (Ref. ZN1VI-TP41)
KNX capacitive color touch panel



Z41 Lite (Ref. ZVI-Z41LIT)
Full color capacitive touch panel lite.



InZennio Z38i (Ref. ZN1VI-TP38i)
Monochrome touch panel KNX.



Roll-ZAS (Ref. ZN1VI-TPZAS)
Touch controller.



Square TMD-Display (Ref. ZVI-SQTMD)
KNX Capacitive Room Controller

ACTUATOR ALTERNATIVES (FLOOR HEATING)



MAXinBOX 16 Plus (Ref. ZN1IO-MB16P)
Multifunction actuator. 16 x 16A outputs C-Load.

Can find other Zennio actuator alternatives visiting the next link:

<http://zennio.com/products/actuators>



COMING SOON

HeatingBOX 230V 8X * (Ref. ZCL-8HT230)
Heating actuator for up to 8 outputs 230VAC.



MAXinBOX 8 (Ref. ZN1IO-MB8)
Multifunction actuator 8 outputs



MINiBOX 25 (Ref. ZIO-MN25)
Multifunction actuator with 2 outputs (16A) and 5 analog-digital inputs



HeatingBOX 230V 4X * (Ref. ZCL-4HT230)
Heating actuator for up to 4 outputs 230VAC

ACTUATOR ALTERNATIVES (FANCOIL)



[MAXinBOX FC 0-10V FAN](#) (Ref. ZCL-FC010F)

FAN-COIL Controller for up to Two 2-Pipe or 4-Pipe Units with 0-10 VDC Fan Speed Control Signal

*Only Fancoils with auto speed regulation with 0- 10 V signal



[ACTinBOX MAX 6 FANCOIL](#) (Ref. ZN1IO-AB60)

Fan Coil 2/4 Pipes



[MAXinBOX FC 0-10V VALVE *](#) (Ref. ZCL-FC010V)

Fan-coil controller for a 2-Pipe or 4-Pipe fan coil with 0-10 VDC valves and up to 4 fan speeds.



[MAXinBOX FANCOIL 4CH2P](#) (Ref. ZCL-4XFC2P)

Fan coil controller for up to 4 units of 2-pipes fan coil



[ACTinBOX QUATRO FAN COIL](#) (Ref. ZN1IO-AB40)

Fan Coil 2 Pipes



[MAXinBOX FANCOIL 2CH2P *](#) (Ref. ZCL-2XFC2P)

Fan coil controller for up to 2 units of 2-pipes fan coil

MATTERS TO CONSIDER

- As you may have noticed, the floor heating system has been configured with a PI-PWM control whereas a PI-continuous control has been configured for the Fancoil. It is due to the floor heating valve considered has only two positions: on and off. In the case of the fancoil, the PI-continuous signal is used for the automatic fan speed selection and the pulse width modulation (PWM) of the signal is performed by the fancoil controller.
- The different between the cycle times of both controls is due to the fact that the floor heating system is slower and has a big inertia, therefore it needs a bigger time (between 40 and 60 minutes). On the contrary, the Fancoil is a faster system with little inertia, consequently a cycle of 15 minutes is usually enough.