

User Guide

Viega Floor Sensor

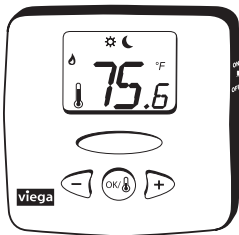


This document is subject to updates. For the most current Viega technical literature please visit www.viega.us.



Viega products are designed to be installed by licensed and trained plumbing, mechanical, and electrical professionals who are familiar with Viega products and their installation.

Installation by non-professionals may void Viega LLC's warranty.



Do not apply voltage to the floor sensor at any time. This will damage the sensor.

Description

The Viega floor sensor is a two-wire, water sealed probe that can be used to accurately measure slab or floor temperatures. It is designed to be used with Viega's digital thermostat (part number 18050).

Wiring the Floor Sensor

The floor sensor should be placed in conduit for protection and repair. A ½" PEX (capped or plugged) is commonly used as conduit for the slab sensor. Sensor should be 18" from line voltage (110V). If crossing line voltage wire, cross at 90° angle. Line voltage interference can result in inaccurate readings of the sensor.

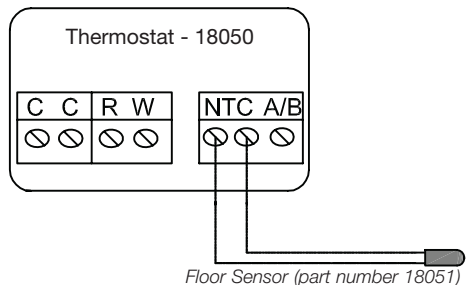
- 1 Connect one wire of the floor sensor to one NTC terminal of the digital thermostat.
- 2 Connect the other wire of the floor sensor to the other NTC terminal of the digital thermostat.



Floor sensor may be extended. Total length not to exceed 32 ft.



When extending floor sensor use 18 AWG 2 conductor wire or similar.



Testing the Floor Sensor

Tools

- A good quality electrical test meter capable of measuring up to 5,000kΩ (1kΩ = 1,000Ω).
- A good quality analog or laser thermometer. If an analog style thermometer is used it must be left on the floor long enough for it to acclimate to the floor temperature.

Instructions

- 1 Measure the floor temperature.
- 2 Disconnect the floor sensor wires at the thermostat.
- 3 Connect the electrical tester to the floor sensor wires and measure resistance.
- 4 Compare the measured temperature and resistance to what is listed in the table below.
- 5 If the measured resistance is higher or lower by +/-5%, you may have a damaged sensor or the sensor wire may be broken or shorted. Example: if the floor temperature is 77°F the resistance should be 10,000Ω.

Resistance Chart	
Temperature	Resistance (kΩ)
50°F	~ 19.5kΩ
59°F	~ 15.5kΩ
68°F	~ 12.5kΩ
77°F	~ 10kΩ
86°F	~ 8kΩ

Programming

Start Up

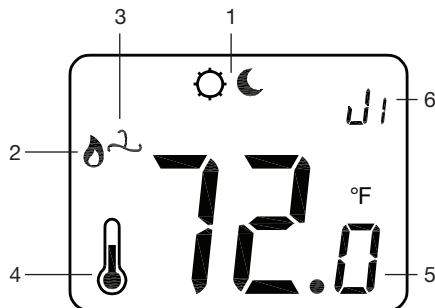
- Use the switch on the right side of the thermostat to power on or power off the heating.

CAUTION!
In this mode, your installation can freeze.

- The setting temperatures are kept in memory indefinitely.

The programming that follows is for the floor sensor only. For complete installation/programming instruction see the digital thermostat product instructions.

Display Window

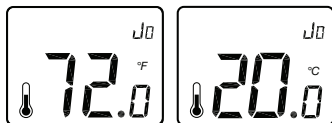


- 1 Operating mode menu (programming parameter)
- 2 Boiler in operation
- 3 Fan/AC operation
- 4 When displayed thermostat indicates the measured air temperature or floor temperature if floor sensor is attached. If flashing attention is required to one of the below:
 - Actual floor temperature is below the minimum floor temperature set in the thermostat parameters
 - Actual floor temperature is above the maximum floor temperature set in the thermostat parameters
 - Floor sensor is short circuited
- 5 Measured temperature or set temperature
- 6 Programming parameter

Parameter Menus

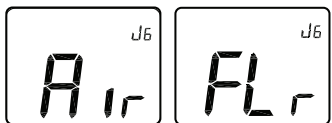
- Press the OK key and hold for 7 seconds, then use + or - to select the installation parameter to be adjusted.
- Press OK to toggle between the parameter setting or to edit the value.
- If the value starts to blink you can use + or - keys to adjust this value.
- Press + and - keys at the same time to reset this value to the factory default value. Once you have adjusted the value press OK to validate this parameter value.
- When you have finished, use + or - keys to go to the End display and then press OK key to exit installation parameter menu.

J0 Parameter



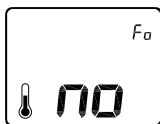
Allows selection of either Celsius or Fahrenheit temperature display. Factory default is °F.

J6 Parameter



Select Air if thermostat is to control room ambient air temperature or FLr for floor temperature regulation. If FLr regulation is selected the thermostat will ignore room ambient air temperature. If no floor sensor is connected to thermostat, the thermostat will control the ambient air temperature. Air regulation is the factory default

Fo Parameter



This parameter is used to calibrate the thermostats external floor sensor if there is a variance in temperature between the actual room floor temperature and the sensor reading.

The calibration must be done after one full day with the thermostat set at the same temperature in accordance with the following description: Put a thermometer on the floor and check the real floor temperature after one hour. When you enter in the calibration parameter, no is displayed to indicate no calibration has been made.

To enter the value read on the thermometer press the OK key. The actual value xx.x must be blinking. Now enter the real value with the - or + keys and validate your adjustment by pressing the OK key.

The message Yes should be displayed. The value will be stored in the internal memory. If you need to recalibrate, return to the installation menu and press the OK key when the message Yes is displayed. Then the actual value xx.x should be blinking.

The old value will be erased if you enter a new value. You could also erase the calibration by pressing - and +. When the value blinks, the message no must be displayed.

FL Parameter



Adjust to set the floor temperature low limit. Adjustment range is 41°F to the FH setting. The default is 41°F.

FH Parameter



Adjust to set the floor temperature high limit. Adjustment range is 83°F to 99°F with 83°F being the default setting.

on Parameter



Minimal starting time in minutes. Adjustable from 0 to half of the cy parameter setting. Default is 02.

of Parameter



Minimal resting time between two heating cycles in minutes. Adjustable from 0 to half of the cy parameter setting. Default is 02. Default is 02.

CLr Parameter



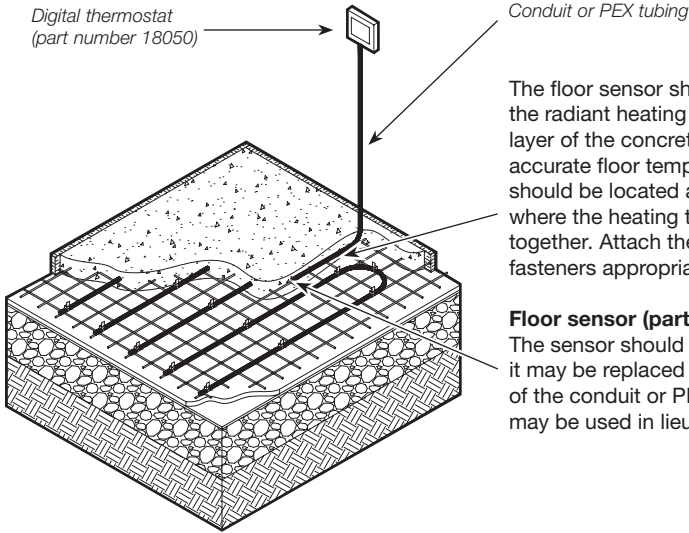
While in this parameter press and hold the OK button until the thermostat restarts. This will restore all factory defaults.

End Parameter



Press and hold OK button to exit programming menu and resume normal thermostat operation.

Floor Sensor Installation with Concrete

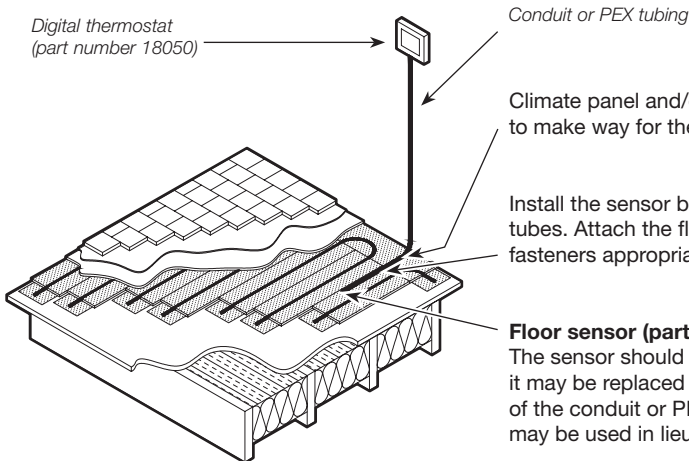


The floor sensor should be installed in between the radiant heating tubes and in the middle layer of the concrete (vertically). To get an accurate floor temperature reading the sensor should be located away from manifold locations where the heating tubes tend to bunch together. Attach the floor sensor conduit with fasteners appropriate for the installation.

Floor sensor (part number 18051)

The sensor should remain in the conduit so that it may be replaced if necessary. Cap the end of the conduit or PEX tubing. Silicone caulking may be used in lieu of a cap.

Floor Sensor Installation with Climate Panel



Climate panel and/or subfloor may be routed to make way for the sensor conduit.

Install the sensor between the radiant heating tubes. Attach the floor sensor conduit with fasteners appropriate for the installation.

Floor sensor (part number 18051)

The sensor should remain in the conduit so that it may be replaced if necessary. Cap the end of the conduit or PEX tubing. Silicone caulking may be used in lieu of a cap.

V Viega LLC
585 Interlocken Blvd.
Broomfield, CO 80021

Phone (800) 976-9819
www.viega.us

UG-HC 566015 1219 Floor Sensor (EN)