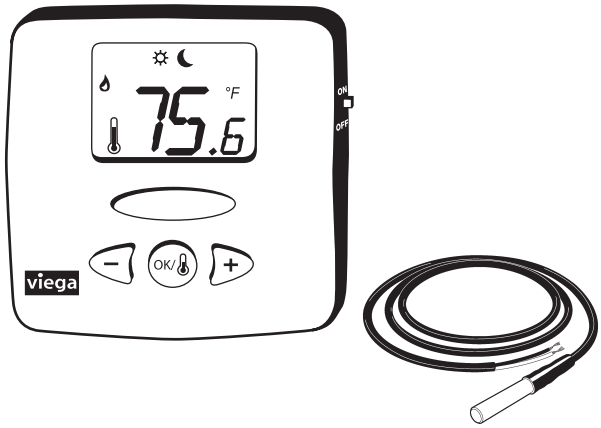
Product Instructions

Floor Sensor

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).



Specifications

Accuracy:	0.2° F
Power supply:	24 VAC +/- 10% 60 hz 15w max
Output:	24 VAC 15W max
Floor limiting Range:	50°F - 104°F
Resistance:	NTC Thermistor 10k ohms
Length:	10' cable
Total extendable length:	32 ft.

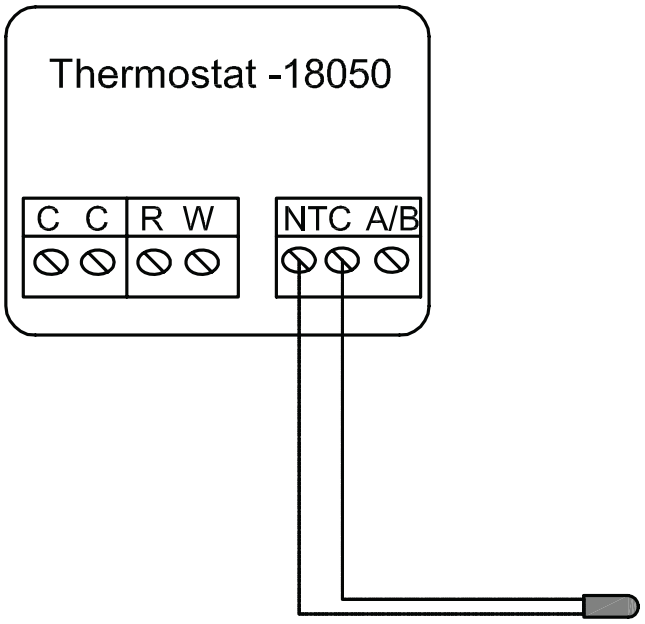
Wiring floor sensor

The floor sensor should be placed in conduit for protection and repair. 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.

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

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



Floor Sensor (part number 18051)

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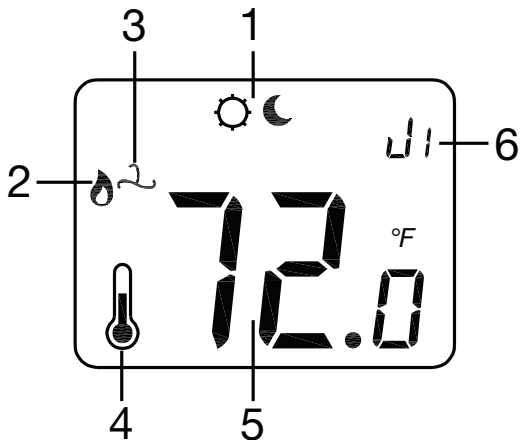
Programming

Note:
- **Start up**: Use the switch on the right side of the thermostat to power on or power off the heating.
- **Be careful!** In this mode, your installation can freeze.
- The setting temperatures are kept in memory indefinitely.

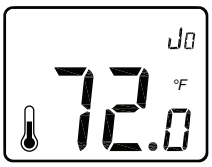


Display Window
1. Operating mode menu (programming parameter)
2. Boiler in operation
3. Fan/AC operation
4. When displayed thermostat indicates the measured air temperature or floor temperature if floor sensor is attached. If flashing attention is required to one of the below:
   - Actual floor temperature 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

Note: The programming below is for the floor sensor only. For complete installation/programming instruction see the digital thermostat product instructions.

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.

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

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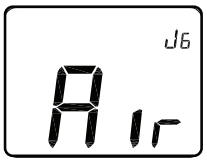
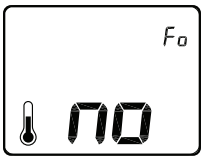
J6 Parameter
  Select **Air** if thermostat is to control room ambient air temperature or **Flr** for floor temperature regulation. If **Flr** regulation is selected the thermostat will ignore room ambient air temperature. If no floor sensor is connected to thermostat, the thermostat will control the 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 41ºF to the “FH” setting. The default is **41ºF**.

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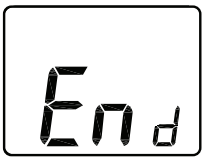
FH Parameter
 Adjust to set the floor temperature high limit. Adjustment range is 83ºF to 99ºF with **83ºF** being the default setting.
on Parameter
 Minimal starting time in minutes. Adjustable from **0** to half of the **cy** parameter setting. Default is 02.
of Parameter
 Minimal resting time between two heating cycles in minutes. Adjustable from **0** to half of the **cy** parameter setting. Default is 02.
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.

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Testing 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.

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

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

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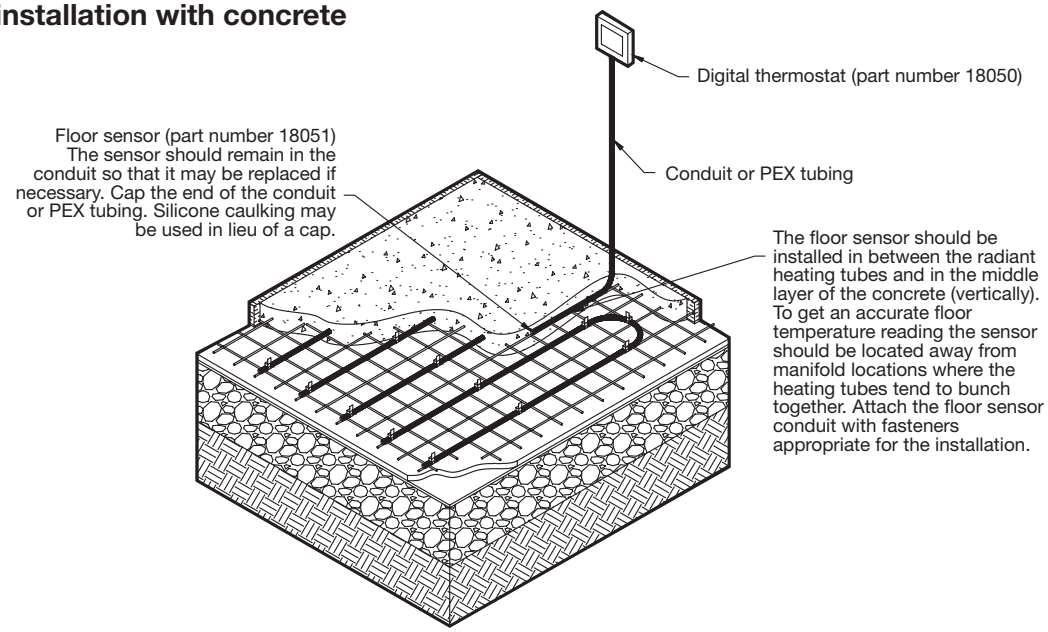
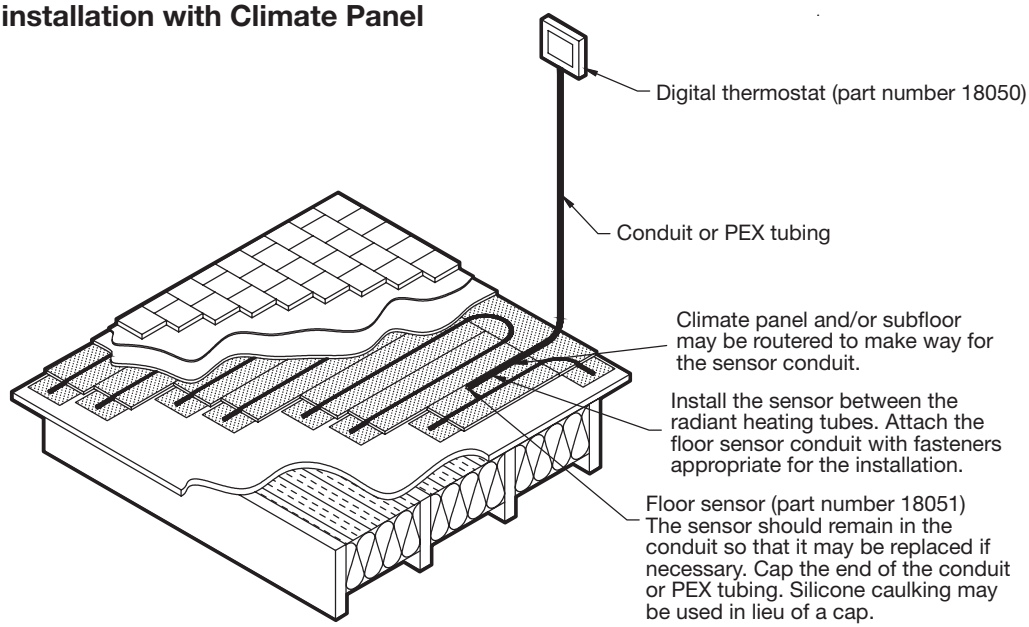
Floor sensor installation with concrete



Floor sensor installation with Climate Panel



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Viega LLC, 100 N. Broadway, 6th Floor • Wichita, KS 67202 • Ph: 800-976-9819 • Fax: 316-425-7618