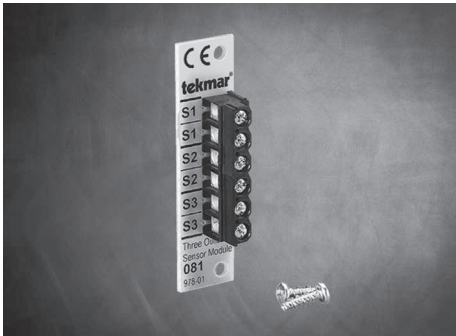


User Guide

Viega Multiple Outdoor Sensor



Description

The multiple outdoor sensor module is an optional outdoor sensor module which allows up to three controls to share one outdoor sensor enclosure. The multiple outdoor sensor module will work with all Viega heating controls that use the outdoor sensor (hydronic mixing block, basic heating control, advanced heating control and the advanced snow melt control).

Features

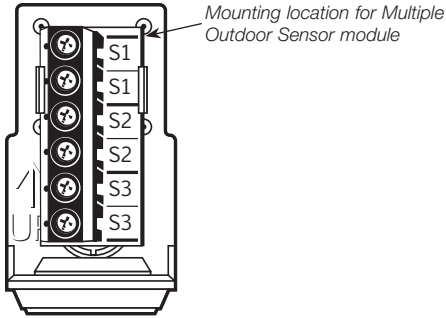
The multiple outdoor sensor module includes three 10k Ω thermistors which provide an accurate measurement of outdoor temperature. Each sensor has two terminals for wiring. The module is attached inside the outdoor sensor enclosure included with the control, and allows for three separate sensors to be combined into a single enclosure mounted on the exterior of the building.



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.**



Installation

The multiple outdoor sensor module is designed to mount in the outdoor sensor enclosure as shown in the diagram and secured by two plastic clips.

- 1** Remove the single sensor module that comes included with the outdoor sensor and replace with the multiple outdoor sensor module.
- 2** The multiple outdoor sensor module is mounted into the outdoor sensor enclosure.
- 3** Connect two conductor 18 AWG or similar wire between the terminals S1 and S1 and the outdoor sensor terminals on one heating control. Do not run the wires parallel to telephone or power cables. If the sensor wires are located in an area with strong sources of electromagnetic interference, shielded cable or twisted pair should be used or the wires can be run in a grounded metal conduit. If using shielded cable, the shield wire should be connected to the Com terminal on the control and not to earth ground.
- 4** Repeat the above steps for the second (S2 and S2) and third (S3 and S3) sensors.



Maximum wire length from control to sensor is 500 ft.

Testing

A good quality test meter capable of measuring up to 5,000 k Ω (1k Ω = 1000 Ω) is required to measure the sensor resistance. In addition to this, the actual temperature must be measured with either a good quality digital thermometer, or if one is not available, a second sensor may be placed alongside the one to be tested and the readings compared.

- 1** First measure the temperature using the thermometer and then measure the resistance of the sensor at the control. The wires from the sensor must not be connected to the control while the test is being performed.
- 2** Using the chart on the next page, estimate the temperature measured by the sensor. The sensor and the thermometer readings should be close.
- 3** If the test meter reads a very high resistance, there may be a broken wire, a poor wiring connection, or a defective sensor. If the resistance is very low, the wiring may be shorted, there may be moisture in the sensor, or the sensor may be defective.
- 4** To test for a defective sensor, measure the resistance directly at the sensor location with the wires disconnected.

Do not apply voltage to a sensor at any time as damage to the sensor may result.

Resistance Table

Temperature		Resistance Ω
$^{\circ}\text{F}$	$^{\circ}\text{C}$	
-50	-46	490,813
-45	-43	405,710
-40	-40	336,606
-35	-37	280,279
-30	-34	234,196
-25	-32	196,358
-20	-29	165,180
-15	-26	139,402
-10	-23	118,018
-5	-21	100,221
0	-18	85,362
5	-15	72,918
10	-12	62,465
15	-9	53,658
20	-7	46,218
25	-4	39,913
30	-1	34,558
35	2	29,996
40	4	26,099
45	7	22,763
50	10	19,900
55	13	17,436
60	16	15,311
65	18	13,474
70	21	11,883
75	24	10,501
80	27	9,299
85	29	8,250

Temperature		Resistance Ω
$^{\circ}\text{F}$	$^{\circ}\text{C}$	
90	32	7,334
95	35	6,532
100	38	5,828
105	41	5,210
110	43	4,665
115	46	4,184
120	49	3,760
125	52	3,383
130	54	3,050
135	57	2,754
140	60	2,490
145	63	2,255
150	66	2,045
155	68	1,857
160	71	1,689
165	74	1,538
170	77	1,403
175	79	1,281
180	82	1,172
185	85	1,073
190	88	983
195	91	903
200	93	829
205	96	763
210	99	703
215	102	648
220	104	598
225	107	553



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UG-HC 561175 1219 Multiple Outdoor Sensor (EN)

