

HUMID-ALERT HA-III+

Electronic Humidity Sensor

Installation / Owners Manual

Part No. M-001-0091



General Information

The Winland HAIII+ is a sensor used for monitoring remote locations for rising or falling rates of humidity. The HAIII+ is designed and approved to be used with the EnviroAlert® family of monitoring devices including the **EA200-12 & EA400-12**. The HAIII+ may also be used with Winland legacy monitoring devices including the **TA-2HLD, TA-3HLD, UTA-1, DTA-4 & DPM-4**.

The setup of high and low limits is done through the interface on the monitoring device you are connecting to (See previous list of approved devices).

Important Note: HAIII+ must not be used with monitoring devices that are powered with 24V AC/DC. When used with Winland legacy monitoring devices such as UTA-1, TA-2HLD, TA-3HLD, DTA-4; the monitoring devices must be set to read Fahrenheit.

Theory of Operation

The HA-III+ senses the ambient room humidity electronically using a sensing element. Humidity is a complex parameter to sense. Humidity can vary from room to room and from one area in a room to another. From tests we have conducted, the difference between simple room humidity indicators and this sensor can be as great as 30% to 40%. The only true means of checking accuracy is to use a psychrometer to measure the humidity in the same location as the HAIII+ sensor is located. The accuracy specifications of the HAIII+ sensor as used with any of our monitoring devices can be found in the specifications table.

When programming the HAIII+ sensor on the monitoring device; the initial reading you receive should be considered a base reading. **Allow at least 30 minutes of operation for sensor to stabilize prior to setting your high & low limits.** It is necessary for the temperature of the sensor to stabilize before the readings are considered accurate. If the humidity is acceptable and considered in the center of the range of humidity that is to be monitored; this base reading can then be used to establish the high and low limits you wish to monitor. As a basic guide, set the high and low limits as tight as necessary to gain control over the humidity, and adjust the limits either tighter or further apart as experience with monitoring dictates. The outputs of Winland's electronic monitoring devices react within seconds of a limit being exceeded. A sudden burst of humid air from a door opening or a ventilation system starting, could cause a brief change in the humidity reading. To avoid false alarms, a time delay should be added by using the on board time delay found in the EA200-12, EA400-12, UTA-1 or TA-2HLD. Additionally, a time delay could be added to the DTA-4 or DPM-4 models by connecting a TDL-120 time delay board to the relay output of the monitoring device. The TDL-120 wires inline between the monitoring device and the panel. Panel input zones can also be programmed to use a time delay. **It is strongly recommended to utilize a time delay unless your application requires instant notification.**

Installation

The HAIII+ sensor should be flush mounted directly to a flat surface like a wall. The sensor should be located near a thermostat or other control sensors that may be in the area. This location should be free from drafts, heat sources, and direct sunlight. If mounting to a wall, the sensor **must be** located on an interior wall. It is also recommended that the sensor is mounted at a height of 4 to 5 feet from the floor.

To begin installation of the HAIII+, you must first remove the cover. Grasp the HAIII+ between your thumb and index fingers along the long slotted surfaces of the sensor with the Winland Electronics logo facing you. Using a flat bladed screwdriver, insert tip of screwdriver into pry slot and gently pry open top cover until it swings loose from the base (See Figure 1). Remove screwdriver from pry slot, grasp cover beneath detached flange and swing to the right until cover fully detaches. **Do not use excessive force while removing the cover, you may crack or break the plastic housing.**

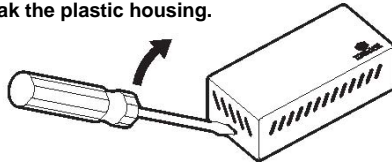


Figure 1

With the cover now fully removed, fasten the base of the sensor to the wall via the screw holes in the base plate using the two screws provided.

Wire the HAIII+ to your monitoring device using the following wiring scheme (See Figures 2 & 3).

Power Input = 12VDC Positive

GND = 12VDC Negative

Sink = Wire to either the white/brown or the white/red sensor input on the DTA-4 or DPM-4

Source = Wire to negative terminal on sensor input of the EA200-12, EA400-12, UTA-1, TA-2HLD, & TA-3HLD (See Figure 3)

Connection will **either** be made to the Sink terminal screw or the Source terminal screw, **never both**.

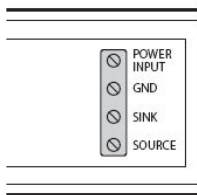


Figure 2

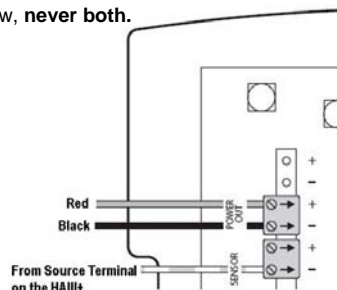


Figure 3

(Shows Typical Use With an EnviroAlert® Device)

Avoid tucking excess wires under the PC board. To allow for maximum air movement, make certain that no wires surround the sensor which is located in the lower left hand corner of the PC board. Replace the cover by aligning the slots in the cover with the tabs on the base and slide the cover back toward the mounting surface until both side flanges snap into place.

Specifications

Humid Alert HAIII+ (P/N M-001-0091)	
Sensing Range	5% - 95% RH
Accuracy	+/- 5% (10% - 90% RH @ 77° F / 25° C)
RH Response Time	TC < 12 min.
Sensing Element	Capacitive / IC
Input Voltage	12 VDC @ 10mA
Case Material	ABS
Operating Temp	32° F to 152° F (0° C to 50° C)
Weight	5 ounces
Dimensions	3.25" x 1.5" x 1" (8.2 x 3.7 x 2.5 cm)
Mounting	Surface Mount

Warranty and Service Information

Winland Electronics, Inc. ("Winland") warrants to the end user/purchaser that each product of its manufacture shall be free from defects in material and factory workmanship for a period of one year from the date of purchase, when properly installed and operated under normal conditions according to Winland's instruction. Winland's obligation under this warranty is limited to correcting, without charge, at its factory any part or parts thereof which shall be returned to the factory, by the original purchaser, transportation charges prepaid, within one year of the date of purchase and which upon examination, shall disclose to Winland's satisfaction to have been originally defective. Correction of such defects by repair to, or supplying replacements for, defective parts shall constitute fulfillment of all Winland's obligations to purchaser under this limited warranty. Repair service performed by Winland after one year from date of purchase will be for a reasonable service charge. This limited warranty shall not apply to any of Winland's products which have been subject to misuse, negligence or accident or which have been repaired or altered outside of Winland's factory. Winland shall not be liable for loss, damage or expense resulting, directly or indirectly, from the use of its products or any other cause. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES, NON-INFRINGEMENT AND TITLE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING, USAGE OF TRADE OR OTHERWISE. ALL OTHER REPRESENTATIONS MADE TO THE END USER/PURCHASER BY ANY OTHER PARTY ARE ALSO EXCLUDED. WINLAND SHALL NOT BE LIABLE TO ANY PERSON FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF WARRANTY OR OTHER CONTRACT, NEGLIGENCE OR OTHER TORT, OR OTHERWISE. Under no circumstances shall Winland's liability under this limited warranty exceed the purchase price paid by the end user/purchaser for the product. No person, agent or dealer is authorized to give warranties on behalf of Winland nor to assume for Winland any other liability in connection with any of its products.

WEEE Product Recovery/Recycling for EU Customers

In an effort to improve waste management in the European Union, the European Union has enacted directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE Directive). According to the WEEE Directive, Winland Electronics must take back waste electrical or electronic equipment covered under the WEEE Directive, at its cost, for all product it puts on the market after July 1, 2006. **The Return Process:** Contact Winland via our website at www.winland.com and go to the WEEE link on the home page. To request additional information regarding Winland's RoHS and WEEE compliance initiative and how it might impact your business, email customerservice@winland.com.

HAIII+ Certification Info



Radio Frequency Interference Requirements: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



CE Marking and European Union Compliance: Products intended for sale within the European Union are marked with the CE Mark, which indicates compliance to applicable Directives and European Norms (EN). Amendments to these Directives or ENs are included:

Applicable Directives

Electromagnetic Compatibility Directive 89/336/EEC; RoHS Directive 2002/95/EC; WEEE Directive 2002/96/EC

Statement of Compliance

Winland Electronics, Inc. hereby declares that this device is in compliance with all the applicable Directives, 89/336/EEC, 2002/95/EC, 2002/96/EC.

Symbols on the Product or Manual Labeling

Symbol	Definition
	For product disposal, ensure the following: <ul style="list-style-type: none">• Do not dispose of this product as unsorted municipal waste.• Collect this product separately.• Use collection and return systems available to you
	WEEE Waste Electrical and Electronic Equipment
	RoHS Restriction of Hazardous Substances



WINLAND
ELECTRONICS, INC.

Manufactured in the U.S.A. by
Winland Electronics, Inc.
1950 Excel Drive, Mankato, MN 56001
Outside MN Phone: 1-800-635-4269
Phone: 507-625-7231
Fax: 507-387-2488
©Winland Electronics, Inc. 2007
www.winland.com