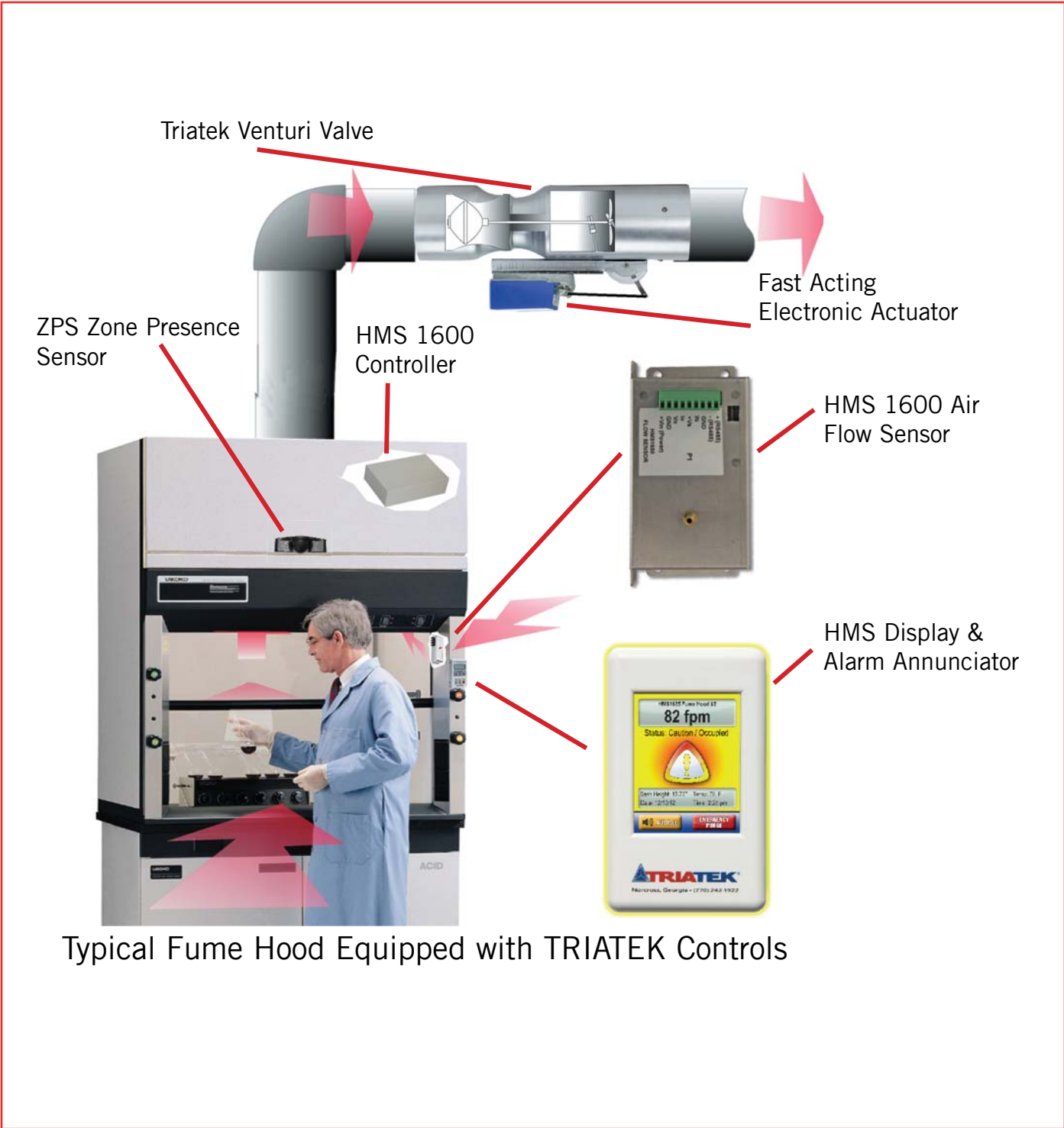


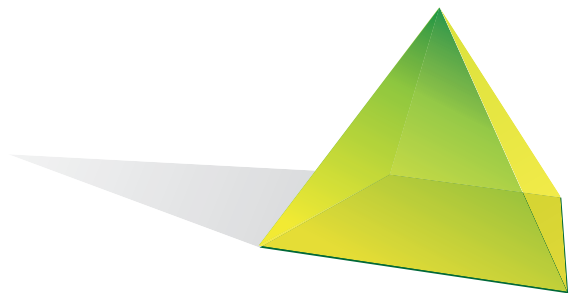


NOTES



Typical Fume Hood Equipped with TRIATEK Controls

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ABOUT TRIA TEK

LEGAL NOTICE

This Installers Guide is provided as an industry service by TRIA TEK to aid installers in the installation of its products in the field. While every effort has been made to ensure the accuracy of the contents of this manual TRIA TEK disclaims any warranty or liability for any damages, injury or harm resulting from the installation of its products in the field resulting from any errors in this guidebook. By using this guidebook, installer agrees to indemnify and hold harmless TRIA TEK for any damages including incidental or consequential that occur as a result of utilizing this guidebook. Installer accepts complete responsibility for the safety of its employees during installation and agreed to take every reasonable precautionary safety measure for its employees and persons under its control.

TRIA TEK makes no warranty of any kind with regard to this publication, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

TRIA TEK reserves the right to change product, system options or features, or the information contained in this publication. This publication contains proprietary information, which may not be reproduced without the written consent of TRIA TEK.

Deviation from the specifications contained in this manual can result in product damage, additional site work, delays in system installation and additional installation charges.

Contractors are advised to contact TRIA TEK Technical Support for any questions or concerns it may have concerning site specific conditions or anomalies that may preclude using the specifications contained in this manual.

Contractor agreed to comply with all applicable local, state, federal and administrative laws and regulations and to ensure that all OSHA, NFPA and other agency recognized safety codes are followed.

ABOUT TRIA TEK: COMPANY BACKGROUND

Founded in 1985, TRIA TEK of Norcross GA has grown to become one of the preeminent manufacturers of Building Automation Systems (BAS) in the world. The founding partners of TRIA TEK have combined

experiences in the industry of over 75 years and have used such expertise to conceive, develop and produce products that are state of the art, forward thinking, patentable, and highly relevant to solving and addressing many of the safety and energy management issues prevalent in the industry today.

TRIA TEK was among the first, and continues to be a pioneer, in developing products that are interoperable with other building automation systems and products and, as such, has positioned itself at the forefront of the industry's inexorable move towards integrated systems. As part of its continuous improvement process, TRIA TEK continues to innovate existing products and develop new products that will add to its core business and fulfill its mission to be the preeminent supplier of airflow controls for laboratory and medical applications.

NATURE OF BUSINESS

Based in Norcross, GA, TRIA TEK has been manufacturing laboratory airflow controls since 1989 and has over 1500 laboratory and hospital installations throughout the world. TRIA TEK offers the most comprehensive line of laboratory airflow control products in the marketplace including: fume hood airflow controllers, sash position controllers, volumetric offset controllers, room pressure controllers, venturi valves, blade dampers, electric actuators, pneumatic actuators, lighting controls, and the most integration options with BAS companies through LON, BACnet, Modbus, Johnson Controls N2 direct connect, and other custom drivers. These options enable TRIA TEK to supply its customers with a unique solution configured for the specific needs of its facility and customer needs rather than attempting to "force" a particular method of control on the customer. TRIA TEK manufactures all of its products from its headquarters facility in Norcross, GA and goes to market through exclusive manufacturer's agents, BAS contractors, and other entities worldwide.

Most TRIA TEK products can be integrated with all of the major BAS manufacturers to provide facility managers, specifiers, contractors and end users with maximum design flexibility to meet their own unique needs and applications. With over 3000 installations worldwide and comprehensive experiences in providing solutions and applications for every conceivable kind of environment, TRIA TEK has made a name for itself as the one-stop shop for any building owner or facility manager that needs building automation products for their facility.

WARRANTY

All TRIA TEK products are fully warranted for two years (third year available) and are factory tested and programmed before they are shipped (unless required in the field) worldwide from the TRIA TEK manufacturing facility. TRIA TEK supports its products through its home office and authorized distributors worldwide.

TECHNICAL SUPPORT

Factory telephone support for all TRIA TEK products are provided from 8AM-5PM EST Monday through Friday at 888-242-1922. Complete product information is available from our web site 24 hours a day at: www.triatek.com.

INSTALLATION

GENERAL DESCRIPTION

The Zone Presence Sensor, part of Triatek's complete fume hood solution, provides economical fume hood usage without compromising safety. Using its microwave motion sensor, the attached controller is instantly instructed to switch to OCCUPIED mode once an operator is in front of the fume hood. Unattended fume hoods will revert to an UNOCCUPIED status after a user specified number minutes thereby saving energy.

- Visible LED to verify activation
- Fast install mode lets pattern be set without cycling
- HPR™ provides additional level of motion detection after initial activation
- Selectable bi-directional or unidirectional (Approach/Depart)
- Narrow & wide pattern antennas
- Dual axis pattern adjustment (left/right; in/out)

INSTALLATION PREPARATION

NOTE: Remember to follow these safety precautions:

- Shut off power to the automatic door before wiring sensor.
- Always ensure wiring is located clear of any moving door parts to avoid damage.
- Always be aware of pedestrian traffic. Keep people clear of the work area during set up.
- Comply with all applicable building codes and safety standards (ANSI A156.10).

1. Remove the cover of the ZPS-100 by placing the blade of a small screwdriver in the notch in the right side of the cover as shown (Fig 1). Once the sensor is attached to the header always remove the cover in this same manner.

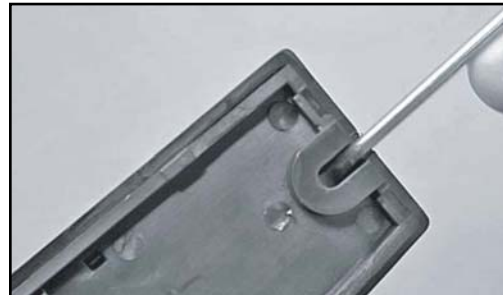


Fig. 1. Insert small screwdriver and pry upwards

2. Peel and attach the self-sticking mounting template (C) at the desired location. Drill 3 holes noted on template (1 wire passage hole, 2 screw pilot holes).

3. Insert mounting screws partially into holes. Route the wire harness through the wire passage hole as shown (Fig. 3). Install the ZPS-100 onto the mounting screws and tighten.

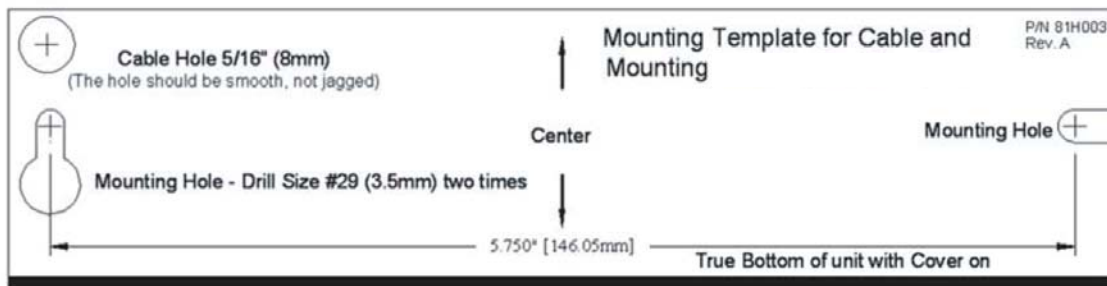


Fig. 2. Mounting template

SENSOR MOUNTING

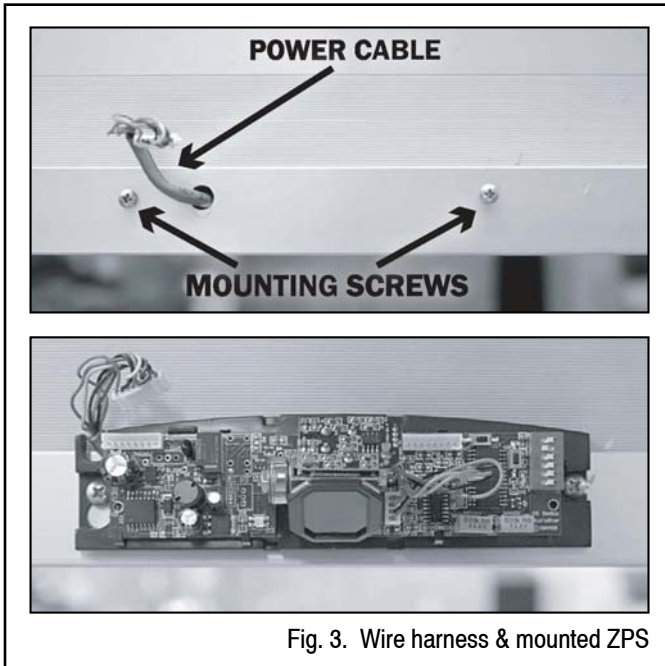


Fig. 3. Wire harness & mounted ZPS

SENSOR WIRING

With power OFF, connect sensor wiring to the operator control as shown (pages 10 - 11) and with the accompanying table (Fig. 4).

Product	Jumper Setting	Triatek Digital Input Connection
HMS1655 (BACnet)	None	DI-2, DI-3, DI-4
HMS1650 (BACnet)	None	DI-2, DI-3, DI-4
HMS1655L (LON)	JP4 / D.I. Vsel / +5	DI-4
HMS1650L (LON)	JP4 / D.I. Vsel / +5	DI-4

Fig. 4 Triatek connections based on model

SENSOR SETTINGS

All jumper settings are preset at Triatek’s factory. However, all settings and adjustments can be made via the ZPS-100 main circuit board as shown (Fig. 5). There is no need for costly or confusing proprietary set up devices.

1. Apply power to the unit. Wait until the LED lights solid (Green = no detection; Red = detection).
2. Program Dip Switches for desired settings (Fig. 5).

LEFT	RIGHT
6. Not used	6. Not used
5. Failsafe OFF	5. Failsafe ON
4. HPR OFF	4. HPR ON
3. Not used	3. Not used
2. Depart	2. Approach
1. Bi-direction	1. Uni-direction

Fig. 5

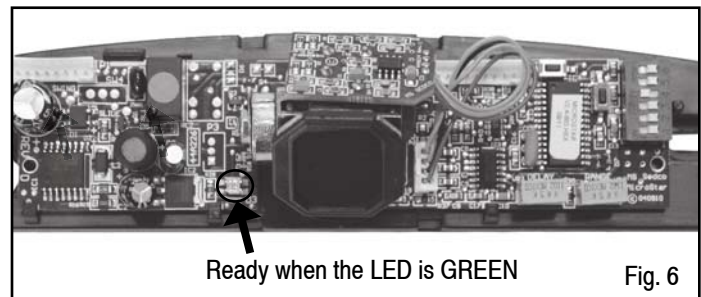


Fig. 6

- Human Presence Radar (HPR): When dipswitch #4 is ON HPR is engaged and provides enhanced motion detection to protect slower moving pedestrians.
- Failsafe: With the ZPS-100 output wired N.O., when dipswitch #5 is ON Failsafe is disabled. When dipswitch #5 is OFF, Failsafe is enabled.

3. Select and install patch antenna as shown (Fig. 7). The wide antenna is installed at factory

INSTALLATION

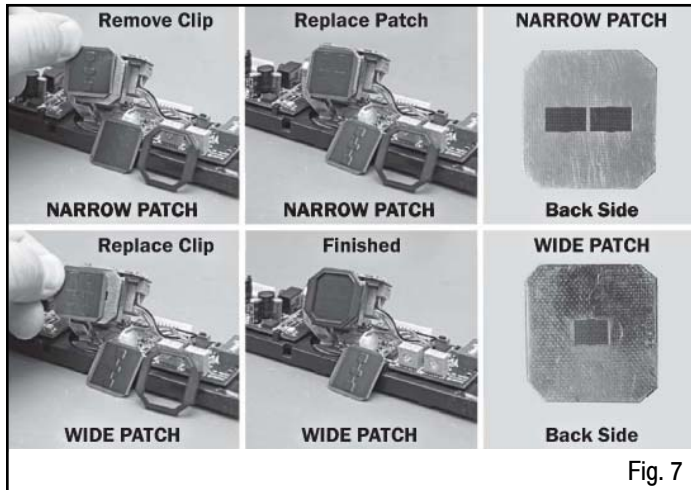


Fig. 7

location can be manually moved right to left or tilted in and out via the antenna (Fig. 8 & 9).

Adjust the head to the LEFT and the RIGHT

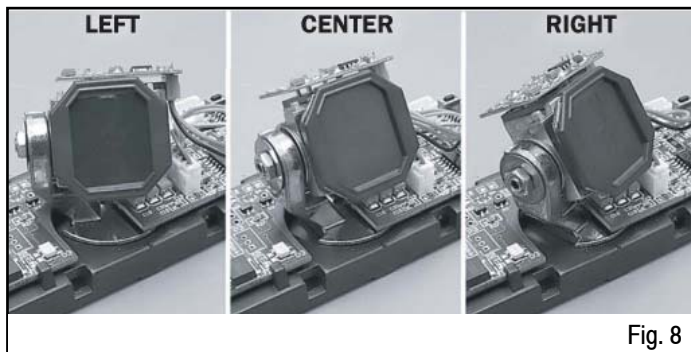


Fig. 8

Adjust the head OUT to IN

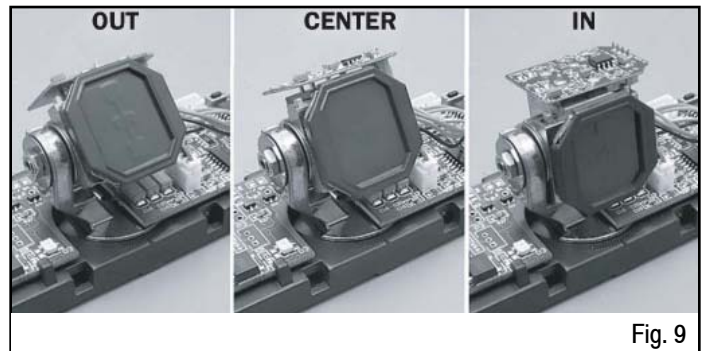


Fig. 9

Installation Mode: To quickly adjust the pattern, press the **Reset** button and then press & hold the **Install** button 3 seconds (the LED will flash orange to confirm). This puts the ZPS-100 into the install mode allowing the installer to walk test the pattern from several different directions. Simply watch the LED while approaching the pattern. Green = No detection; Red = Detection. Once the desired pattern is achieved press the **Reset** button and the ZPS-100 will reset to normal operating mode.

NOTE: Pattern is the same with or without the cover being installed. Walk testing the ZPS-100 can also be done while the unit is in normal operating mode; the Install Mode is an optional time savings feature.

5. Replace the cover by engaging the left side first and then gently snapping the cover into place as shown (Fig. 10).

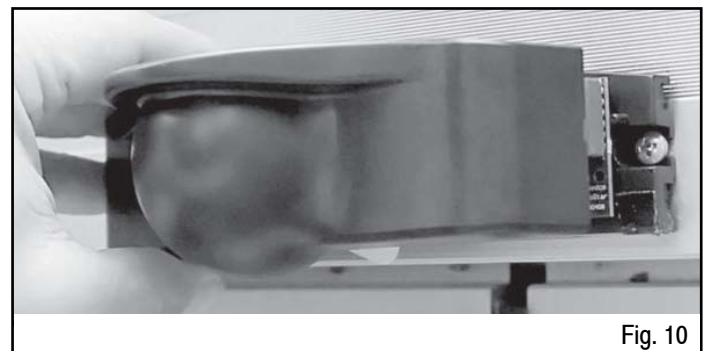
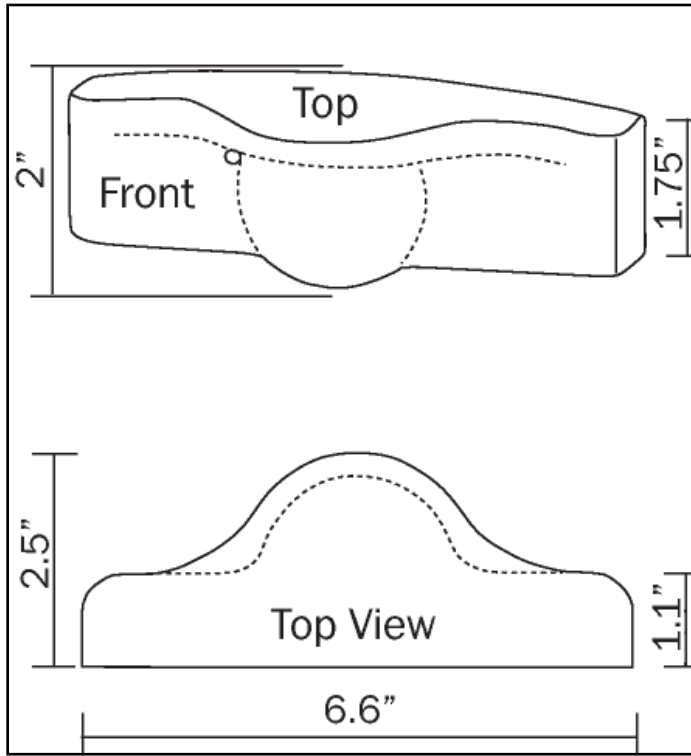


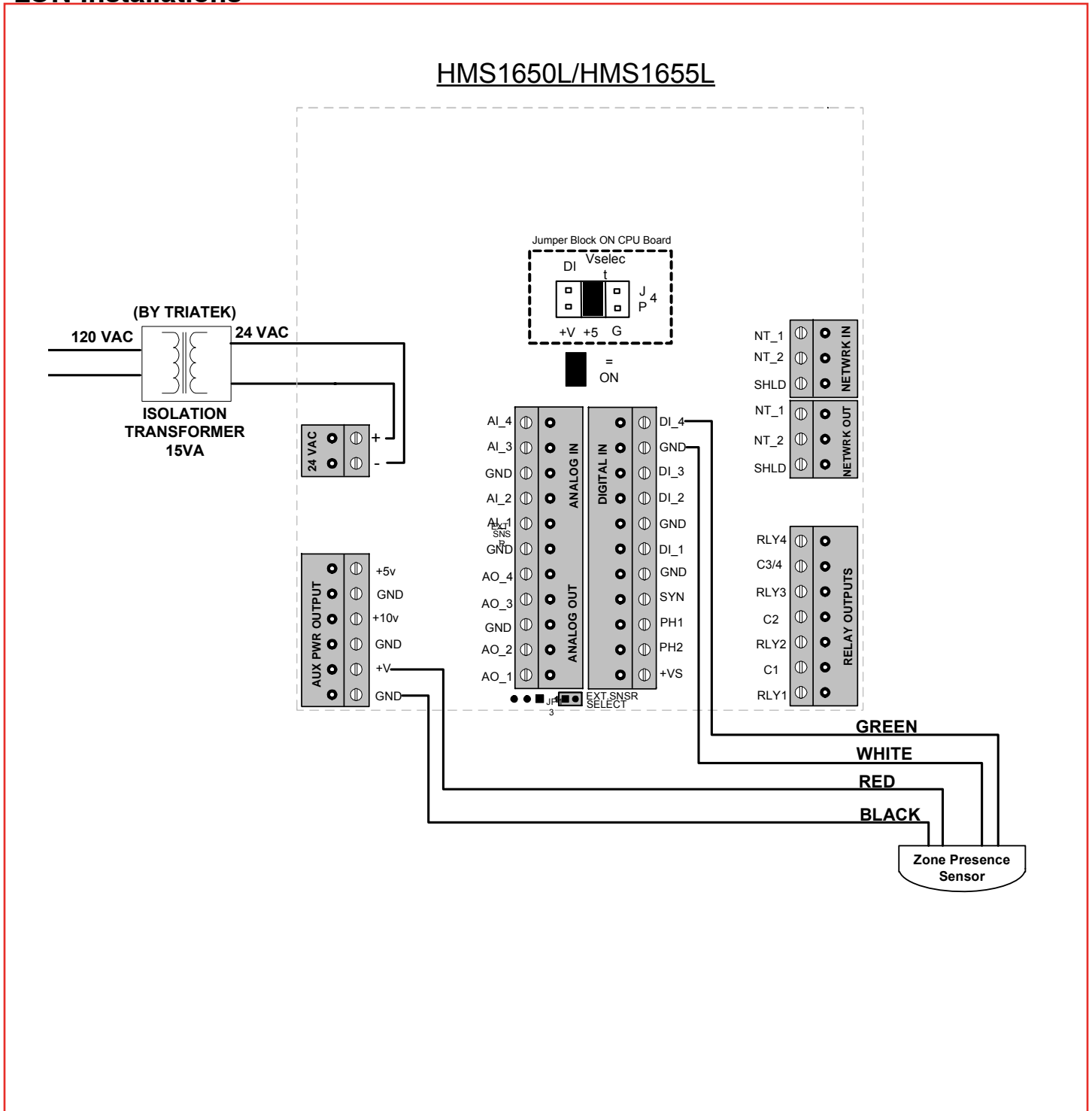
Fig. 10

DIMENSIONS



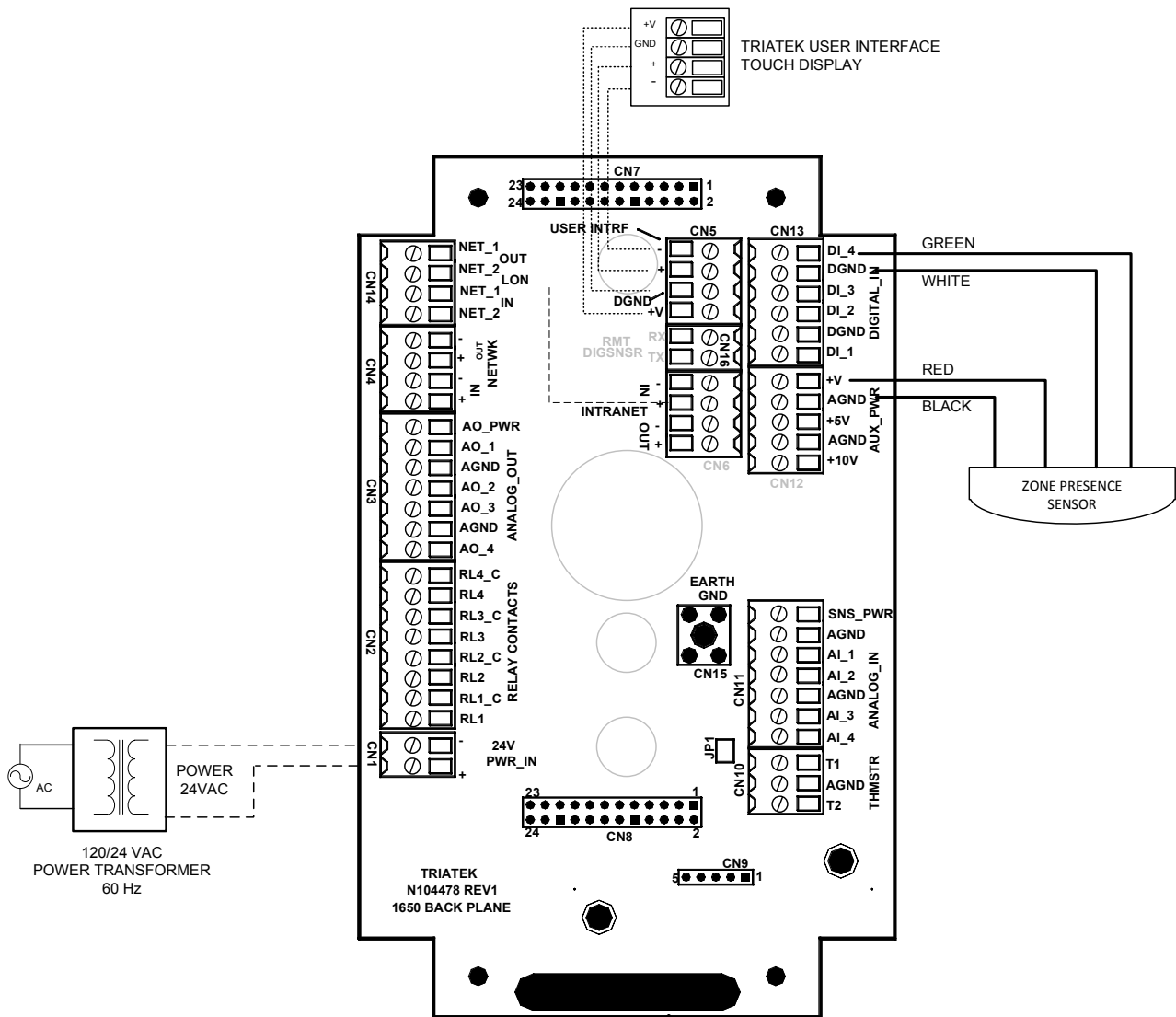
INSTALLATION DIAGRAMS

LON Installations

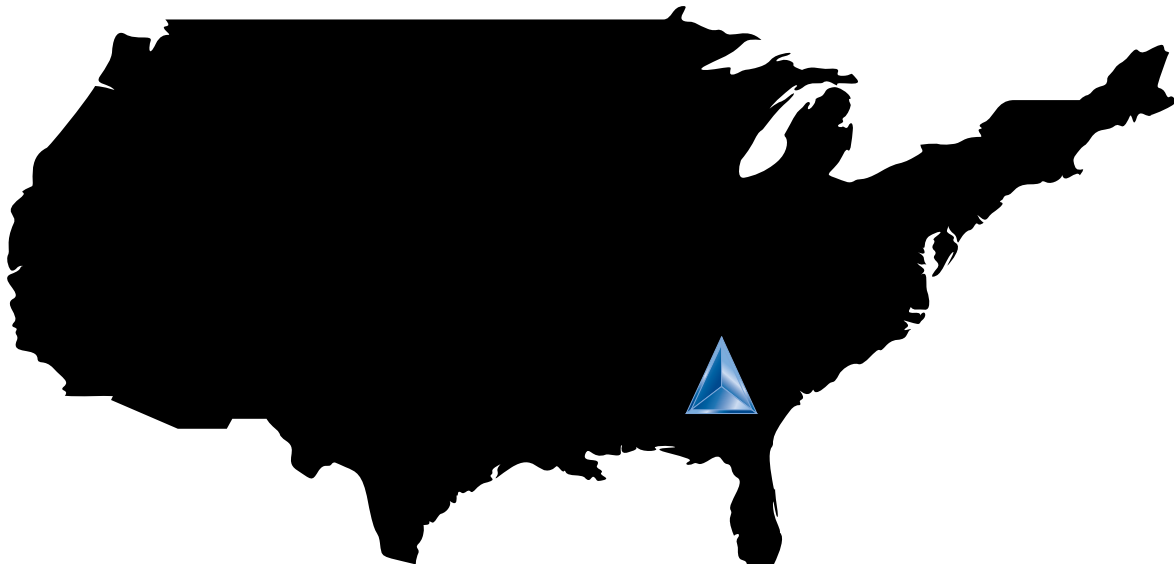


BACnet Installations

HMS1650/HMS1655 BACnet/N2



TRIATEK, located in Norcross Georgia, has an extensive network of manufacturer's representatives located throughout North America to service you. Our helpful, experienced sales team can provide solutions for your Laboratory Controls, Medical Controls, HVAC Controls, and Industrial Instrumentation needs. Call **770-242-1922** or visit our website at: www.triatek.com for more information or to find an agent near you.



Triatek has been a pioneer in controllers since its origins back in the 1980's. Today, Triatek has the most complete line of controllers and monitors in the industry - the latest of which use full color touchscreens. Additionally, Triatek is unique in that the company engineers and sells both venturi valves and controllers or monitors. In other words, Triatek is the one company that can be turned to for a complete air pressure solution.



Laboratories



Classrooms



Vivariums



Hospitals

