

C7355B In-Duct IAQ Monitor

COMMERCIAL GRADE IAQ PRODUCTS

MOUNTING INSTRUCTIONS

E	Keep these instructions together with the device or with the equipment documentation! Only qualified personnel may perform electrical connections for 230 VAC.	F	Cette instruction est à conserver avec le contrôleur ou avec la documentation de l'installation! Le raccordement électrique pour le 230 VAC ne peut être effectué que par le personnel autorisé.	P	Guarde estas instruções junto do regulador ou junto da documentação da instalação! A ligação eléctrica a 230 VAC só deve ser efectuada por pessoal especializado.
D	Diese Anleitung ist beim Gerät oder in der Anlagendokumentation aufzubewahren! Elektrisches Anschließen von 230 VAC ist nur durch autorisiertes Fachpersonal gestattet.	I	Queste istruzioni devono essere conservate insieme al lettore o con la documentazione e dell'impianto! I collegamenti a 230 VAC devono essere eseguiti da personale qualificato.	S	Denna instruktion skall förvaras tillsammans med regler eller anläggningsdokumentationen! Elektrisk anslutning med 230 VAC får endast utföras av behörig personal.
DK	Opbevar denne vejledning sammen med regler eller med anlægssdokumentationen! Elektrisk tilslutning for 230 VAC bør kun foretages af autoriserede personer.	N	Denne vejledningen skal opbevares sammen med regler eller anlægssdokumentationen! Elektrisk tilkobling med 230 VAC må kun udføres af fagfolk.	FI	Tätä ohjetta tulee säilyttää laitteen läheisyydessä tai yhdessä muiden dokumenttien kanssa! Vain asianmukaiset oikeudet omaava henkilö saa suorittaa 230 VAC käyttöjännitteen liitännät.
ES	Conserve estas instrucciones con el recalar o con la documentación de la instalación. La conexión eléctrica a 230 VCA debe hacerse solamente por personal cualificado	NL	Deze handleiding moet bij de regelaar, of met de documentatie van de installatie worden bewaard! De elektrische aansluiting voor 230 VAC mag alleen door geautoriseerd personeel worden uitgevoerd.	PL	Instrukcję obsługi należy przechowywać przy urządzeniu albo w dokumentacji technicznej. Tylko autoryzowany serwis jest upoważniony do podłączenia do 230 VAT.
SC	请将此装配说明书与设备或者与设备 的其他文档保存在一起！ 230 V 交 流电的接线 操作仅允许由合格的专业 人员执行	TC	請將此裝配說明書與設備或者與設備的 其他文件儲存在一起！ 僅能由合格的专业人員進行230 V交流 電的接線作業。	K	본 설치 설명서를 해당 장치 또는 관련 문서 와 함께 보관하시기 바랍니다 . 230VAC 전원 연결은 관련 작업 전문가 에 의 해 수행되어야 합니다 .



SUPPORTED DOCUMENTS

- IAQ Monitor Submittal Data, 31-00439
- IAQ Monitor User Guide, 31-00438
- IAQ Monitor Quick Start Guide, 31-00441

INTRODUCTION

In-Duct IAQ Monitor is designed to be installed in outdoor or return air duct. It monitors PM2.5/PM10, CO2, TVOC, Temp/RH and their configurations. This device communicates over RS-485, and is easily integrating with the building automation system. Please read this instruction carefully before installing and using the device.

When installing this product

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and marked on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check the product operation.
5. Be sure wiring complies with all applicable codes, ordinances and regulations.



WARNING

Electrical Shock Hazard

Can cause severe injury, death or property damage.

Disconnect the power supply before beginning installation to prevent electrical shock and equipment damage. More than one power supply may have to be disconnected.

Installation requirements

(IMPORTANT!)

- For supply air applications, install the device on the main air duct where it is far from the supply air fan and branch ducts.
- For return air applications, install the device on the main air duct close to the return air fan, or more than 1 meter from the return air outlet.
- Installation of pitot tube should be accordance with the direction of the air flow.

- The device should be installed in an accessible location that is convenient for regular maintenance.
- The power supply is 24VAC/VDC. Please note the power part must be waterproof and safe.
- The pitot tube on each monitor of each device are calibrated as a pair. Ensure that the serial number on the monitor and pitot tube match.
- When removing and installing the pitot tube, the monitor must be powered off, it **SHOULD NOT** be connected to electricity. The pitot tube must be fitted and tightened to avoid bad contact of temperature and humidity sensor.

IMPORTANT

To avoid electrical interference, which can cause erratic sensor readings, keep wiring runs as short as possible and do not run unit wires adjacent to the line voltage electrical distribution systems. Use shielded cable. The cable shield must be grounded only at the controlled equipment case.



WEEE (Waste of Electrical and Electronic Equipment)

- At the end of the product life, dispose of the packaging and product in an appropriate recycling center.
- Do not dispose of the device with the usual domestic refuse.
- Do not burn the device.

This symbol on our product shows a crossed-out “wheeliebin” as required by law regarding the Waste of Electrical and Electronic Equipment (WEEE) disposal. This indicates your responsibility to contribute in saving the environment by proper disposal of this Waste i.e. Do not dispose of this product with your other wastes. To know the right disposal mechanism please check the applicable law.

Check Accessories

Unpack the box and review monitor and the accessories according to below list.

1. Instruction manual – 1 piece
2. In-Duct IAQ monitor – 1 unit
3. The pitot tube of monitor – 1 piece
4. Waterproof connector – 1 piece
5. Pipeline seal ring -1 piece
6. Assembly screw – 2pcs; duct mounting screw – 2pcs
7. Hexagonal screwdriver – 1 piece
8. Filter – 1 piece

Monitor Overview

The image below illustrates the typical enclosure of the IAQ monitor. There is a pitot tube, main unit sensor compartment and main unit communication control compartment, as well as an external temp & humidity sensors.

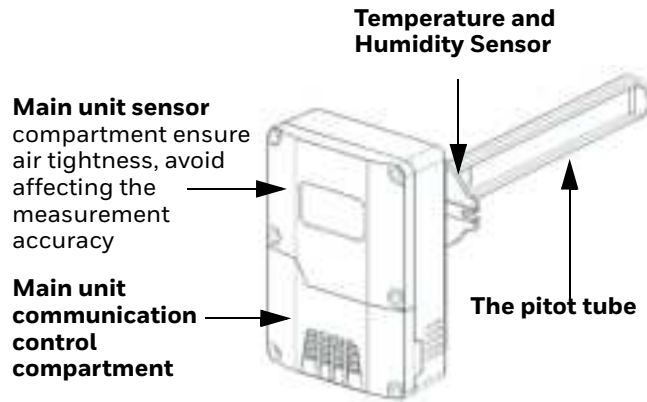


Fig. 1. Monitor overview.

SPECIFICATIONS

Part Number: C7355B1052

Detection Parameters: PM2.5/PM10, CO₂, TVOC, Temperature and RH

Operating Environment:
-4°F–140°F (-20°C–60°C)
0–99 %RH, (Non-condensing)

Storage Condition:
32°F–122°F (0°C–50°C)
10–60% RH

Overall Dimensions: See Fig. 27

Net weight: 1.87lb (850g)

Certification Standard: CE/FCC

INSTALLATION

Assembly of main unit and Pitot Tube

1. See markings on the main unit, as shown in Fig. 2. Turn counterclockwise to remove, clockwise to attach. The pitot tube must be matched with the original main unit with the same serial number.

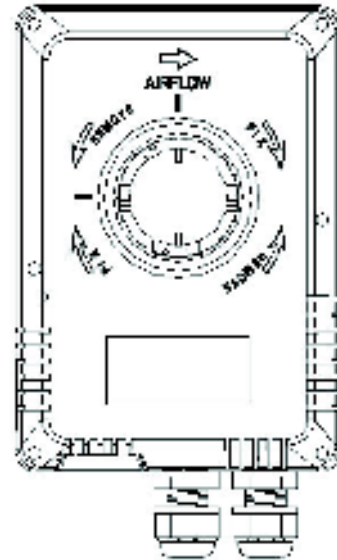


Fig. 2.

2. The pitot tube is paired with the main unit. Their serial numbers are the same, don't mix up pitot tubes with other sensor main units.

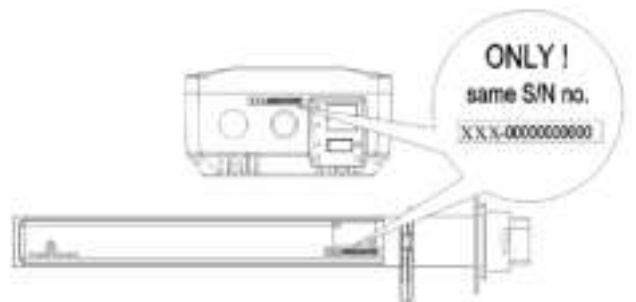


Fig. 3.

3. As shown in Fig. 4, install the side of the pitot tube marked with the Windward Side facing down, and align it with the rear mounting hole of the main unit.



Fig. 4.

4. After the pitot tube is inserted into the main unit assembly hole with the alignment marks matching up, the pitot tube is rotated 90 degrees clockwise.

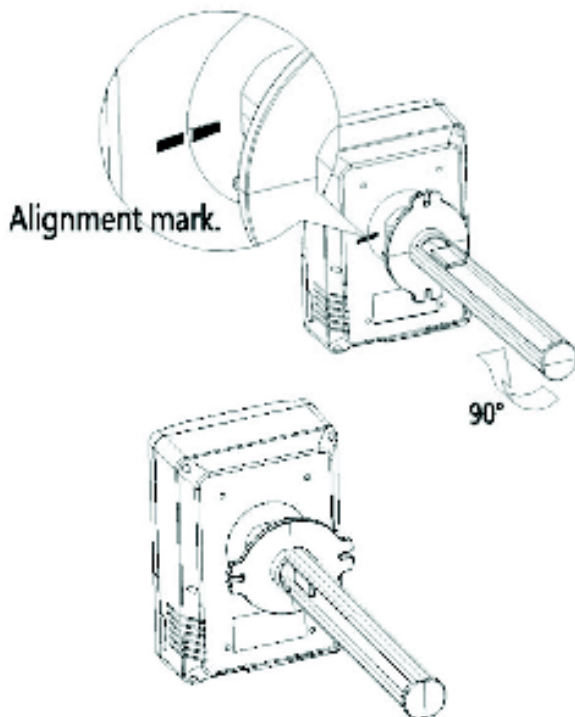


Fig. 5.

FOR AIR FLOW FROM RIGHT TO LEFT (RIGHT IS THE FACTORY DEFAULT)

1. Confirm the installation position and cut a hole with a diameter of 1-3/8 in. in the air duct. Insert the pitot tube into the air duct.

NOTE: The side of the pitot tube marked with Windward Side should face the airflow direction)



Fig. 6.

2. Screw the pitot tube to the outside of the air duct.



Fig. 7.

3. Install the main unit. Connect the main unit horizontally with the pitot tube interface as shown in Fig. 8.

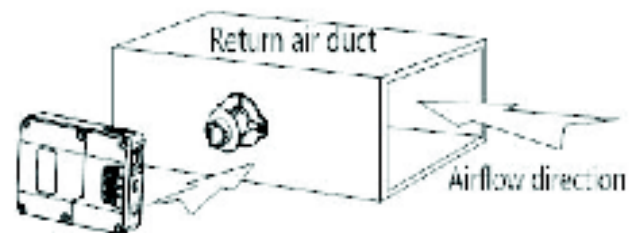


Fig. 8.

4. Rotate it 90 degrees clockwise to fix to complete installation (see Fig. 9).

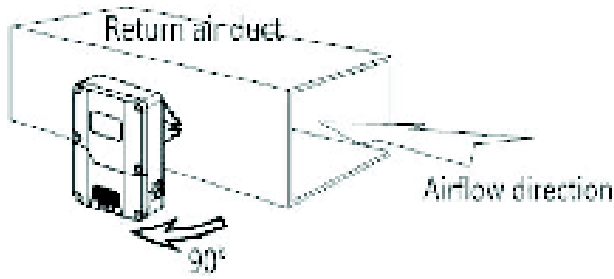


Fig. 9.

IF THE DIRECTION OF THE AIRFLOW IS OPPOSITE TO THE ABOVE, THAT IS, THE AIR FLOW IS FROM LEFT TO RIGHT (IE "LEFT")

The user may install the monitor's face in the upside down direction. If the monitor needs to be in the positive direction, the user needs to reverse the built-in sensor module before installing it on the air duct. It is not recommended to reverse the sensor module unless it is absolutely necessary for daily operation.

1. Unscrew the four assembly screws and open the upper casing part of the main unit.

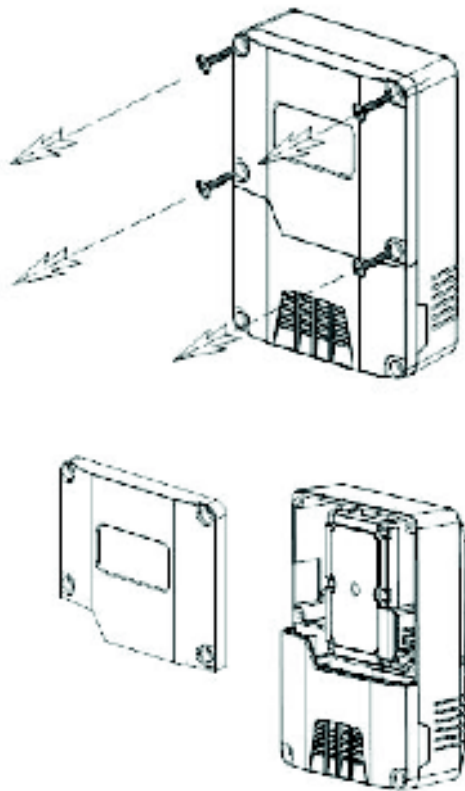


Fig. 10.

2. Pull out the air inlet filter (left side of Fig. 11) from the lower right side of the sensor module, and then remove the fixing screws on the middle of the module (right side of Fig. 11).

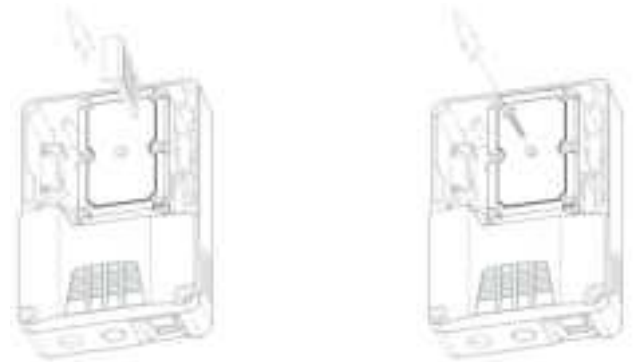


Fig. 11.

3. Remove the sensor module from the sealed cabin with the cable and rotate the module 180 degrees (see top image in Fig. 12). Install the module back to the original position (see the bottom image in Fig. 12).

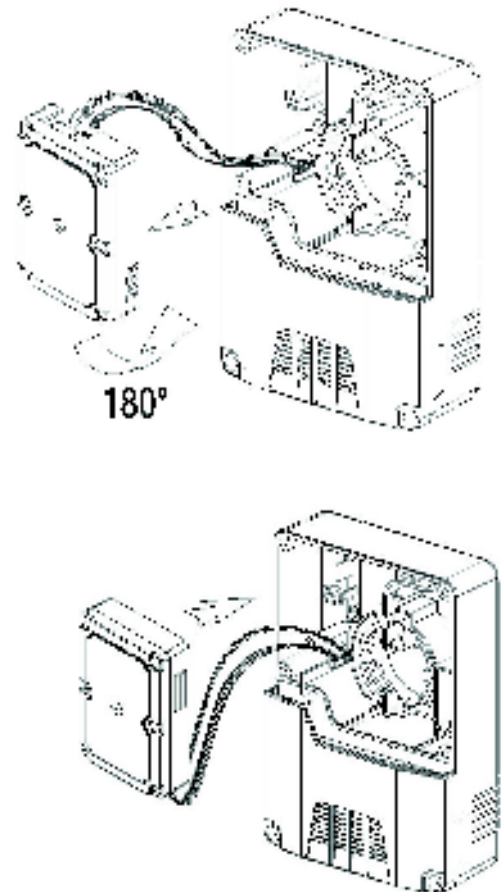


Fig. 12.

NOTE: When the sensor module is installed to the original position, the cable should be passed under the compartment shown in Fig. 13. Do not pass over the compartment, otherwise the sensor module cannot be fixed normally.

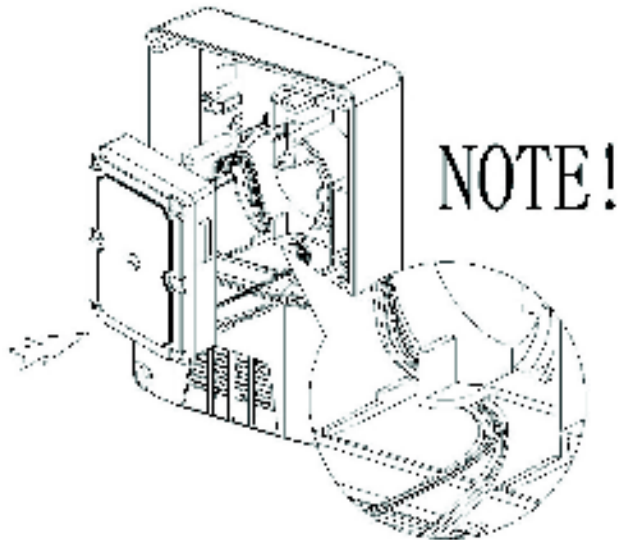


Fig. 13.

4. Fix the sensor module and insert the air inlet filter into the upper left slot of the module (see Fig. 14).

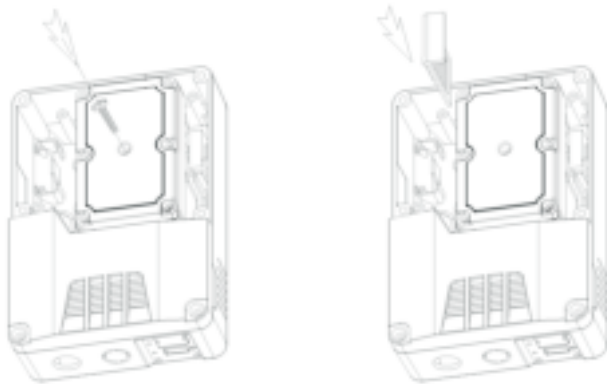


Fig. 14.

5. Put the sensor compartment cover back in place and attach it with the original screws.

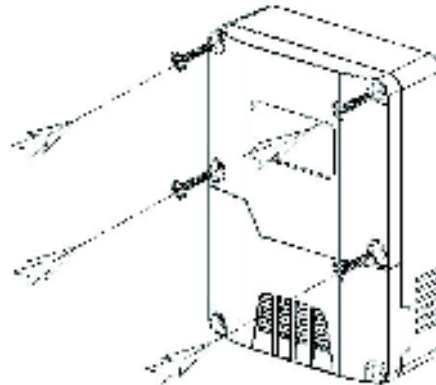


Fig. 15.

6. Install the pitot tube. Confirm the installation position and cut a 1-3/8 in. diameter hole in the air duct.

NOTE: The side of the pitot tube marked with Windward Side should face the airflow direction.



Fig. 16.

7. Insert the pitot tube and fix it with screws.



Fig. 17.

8. Install the main unit. Connect the main unit horizontally with the pitot tube interface (as shown in Fig. 18)



Fig. 18.

9. Then rotate it 90 degrees clockwise (Fig. 19). The installation is completed.

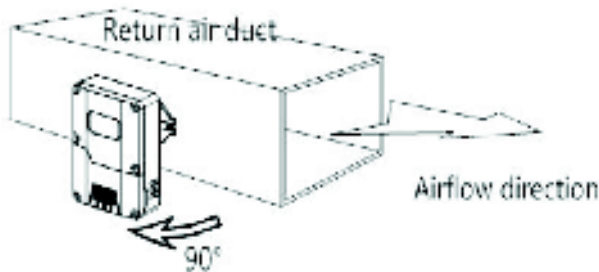


Fig. 19.

POWER SUPPLY AND RS-485 WIRING

IMPORTANT

All wiring must comply with local electrical codes and ordinances. Follow equipment manufacturer wiring instructions when available. Power must not be connected while wiring. Wiring a unit that is powered may result in electrical shock and/or equipment damage.

Wiring Diagram

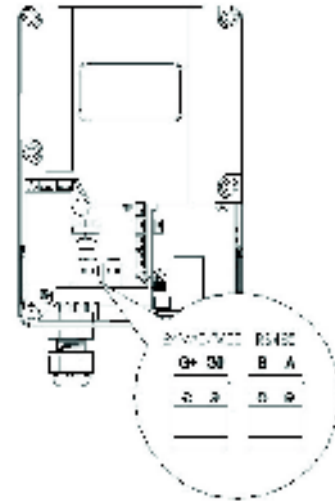


Fig. 20.

There are two sets of terminals, power supply wiring on the left, RS-485 wiring on the right.

1. Remove the cover of the electrical wiring compartment on the main unit.

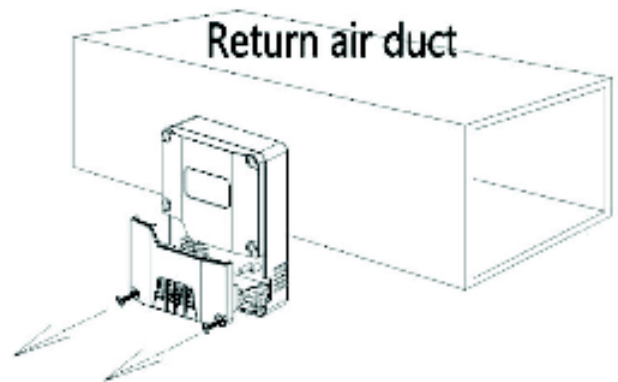


Fig. 21.

2. Remove the two terminal blocks for power supply and RS-485 respectively.

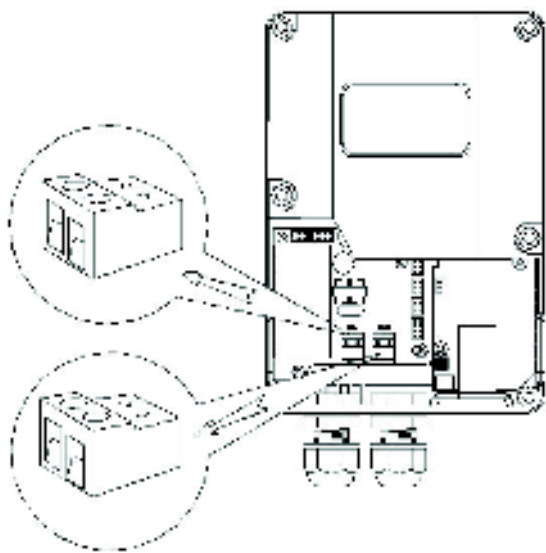


Fig. 22.

NOTE: The left terminal is the power terminal block. The right terminal is the RS-485 terminal block.

3. Run the power cable and RS-485 cable through each waterproof connector as shown in Fig. 23.

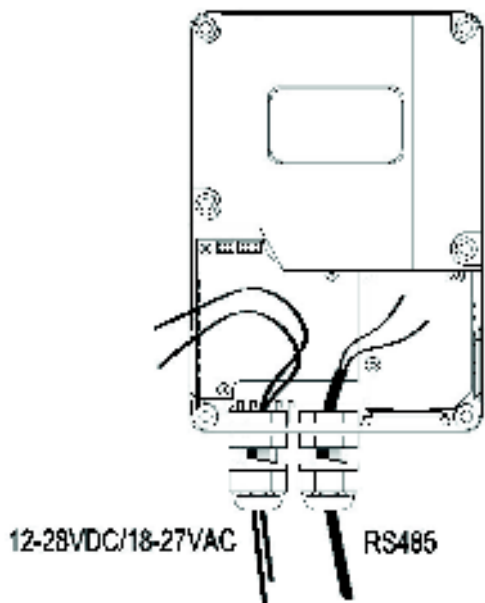


Fig. 23.

4. Connect the cables to the terminal blocks.

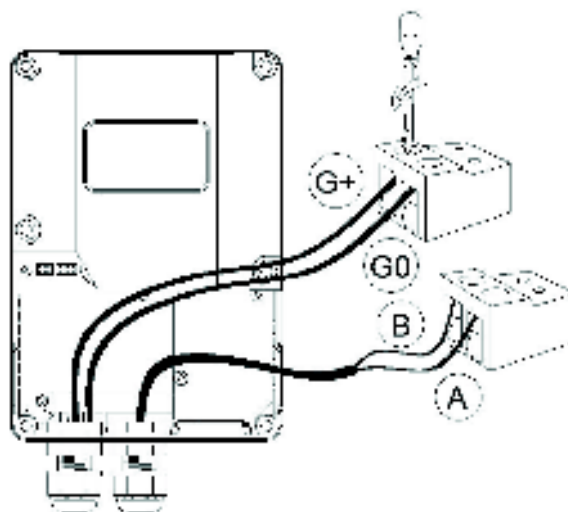


Fig. 24.

5. Plug the terminal blocks back onto the pin connectors and tighten the waterproof connectors.

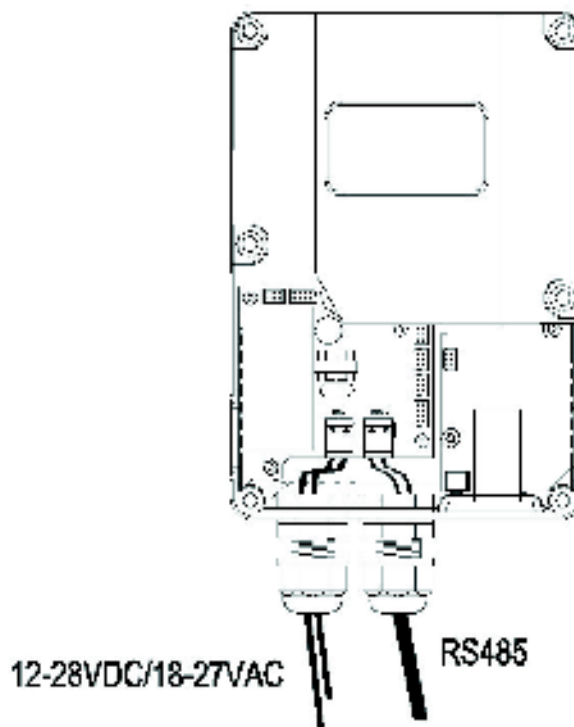


Fig. 25.

6. Replace the cover of the electrical wiring compartment and tighten the screws.

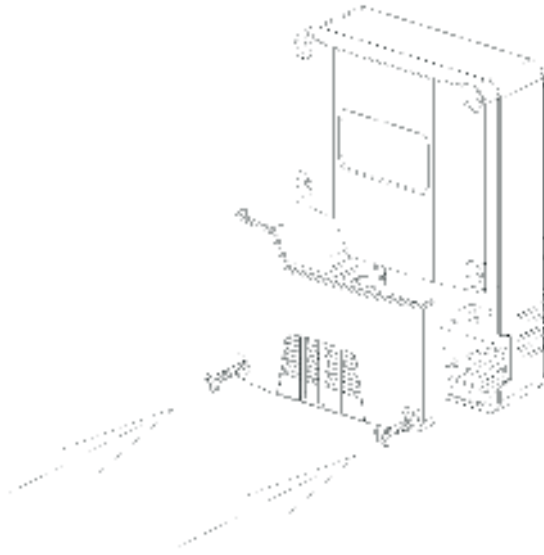


Fig. 26.

DIMENSIONS AND MOUNTING HOLES

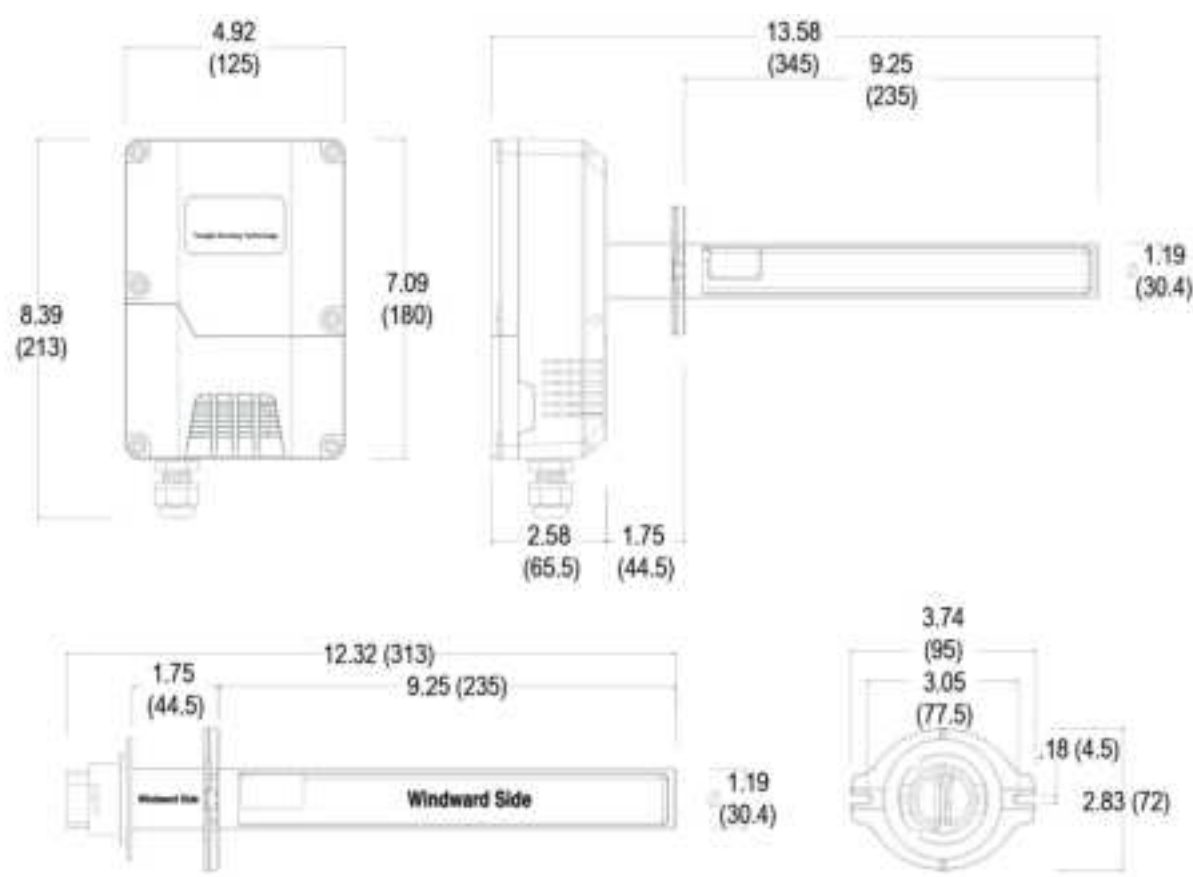


Fig. 27. Dimensions in in. (mm).

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