# TECHNICAL DATASHEET

# VAT-942 VAV Room Thermostat

## Introduction

Welcome to ONAS-TECH: Your Gateway to Cutting-Edge Electronics Solutions.




At ONAS-TECH, we are committed to reshaping the electronics industry landscape. With a foundation built on pioneering technological advancements, ONAS-TECH stands as your reliable partner for innovative and energy-efficient electronic solutions. As we embark on a mission to revolutionize the way electronics are perceived and utilized, we invite you to explore our latest product offerings and join us in shaping the future of technology together.

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## Overview

VAT-942 is used to control the room temp. in Heating or Cooling systems. Typically

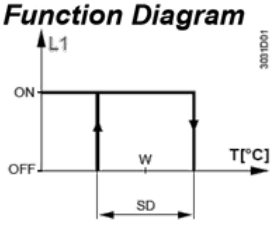
applications including Homes, Residential buildings, Schools, Offices

It is able to control following equipments or device: Zone Valves, Fans, Pumps, Compressor

## Technical Specifications

| | |
|---|---|
| **Housing Material** | • **ABS & Acrylic** |
| **Power Supply** | • **AC220 Vac+/-10%, 50/60Hz** |
| **Power Consumption** | • **<1.5W** |
| **Setpoint Range** | • **5-40℃** |
| **Accuracy/Tolerance** | • **+/-1℃** |
| **Thermistor** | • **10K Ω@25 ℃** |
| **Storage Conditions Temp** | • **-10~60 ℃** |
| **Current Load** | • **≤2 A** |
| **Ambient Temp. Range** | • **0~50℃** |
| **Timing** | • **<1%** |
| **Humidity** | • **< 90% r.h** |
| **EEPROM** | • **it remain the status and settings in case of system electric**<br>• **power is cut off suddenly.** |
| **Compliance** | • **ISO 9001.**<br>• **Approval from the ministry of industry in Egypt.**<br>• **Complied to IEC 63044-5-1 & IEC 63044-5-2 requirements which are equivalent to the following:**<br>**- UL 916 requirements.**<br>**- EN 50491-11 requirements.** |

***Function Diagram***




T Room Thermostat
SD Switching differential (1K)
W Room temperature setpoint
L1 Output Signal for Heating

## Parameters setting

In case of the thermostat is switch off, please press and hold ⊛& Ⓜ buttons for 3 seconds.

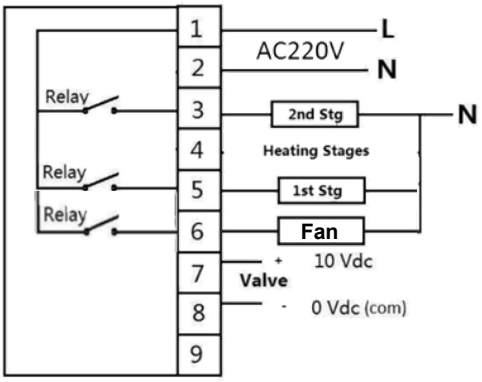
| NO | Parameters | Operated by | button |
|---|---|---|---|
| 1 | Temp Calibration | -9℃~ +9℃ | ∧∨ |
| 2 | P Band Range | 4,6,8 &10 | |
| 3 | I Time Range | 1~59 Sec | |

Button Lock/Unlock
Push and hold ∧ and ∨ buttons simultaneously for 5 sec to LOCK all buttons
Push and hold ∧ and ∨ buttons simultaneously for 5 sec to UNLOCK all buttons

## Wiring Diagram

**Remarks:**

1.When the room temperature is 2 degC lower than setting temperature, both of 1st heating stage and 2nd heating stage switch on.
2.When the room temperature is 1 degC lower than setting temperature, 2nd heating stage switches off but 1st heating stage swithes on.

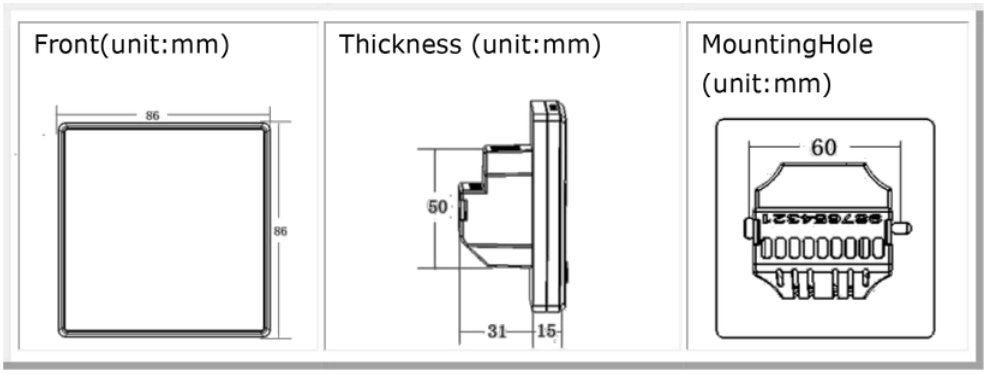



**WARNING: RISK OF ELECTRICAL SHOCK.** Disconnect power supply before making electrical connection. Contact with components carrying hazardous voltage can cause electrical shock and may result in severe personal injury or death.

***Hint : the rated current of thermostat relays up to 2 Amps , if the load more than that , FRB-541 will be needed.***

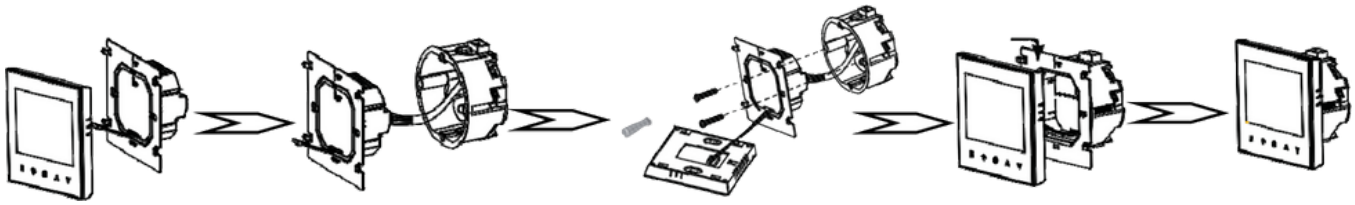
## Color & Dimensions

- **Housing:** white is defaulted, customized colors can be negotiated
- **LCD Display:** Blue backlight is defaulted, White and Green colors are available




## Mounting

Mount the thermostat in location where the air temperature can be measured as accurately as possible without adversely affect by direct solar radiation or other source of heating or cooling.



Make sure the power is OFF! Try turning ON your heating/cooling system by changing the temperature. If you can't get the system to turn ON in 5 minutes, you'll know the power is OFF.
Take off the installation faceplate by rotating and gently pulling, then connect voltage supply/load output/external sensor(if with) wires respectively to appropriate terminals.
Fix the installation plate onto the electric junction box with screws packed in the box.
Fasten the thermostat display part and the installation faceplate through the groove.(Installation process completed)

## Contact us

For all inquiries regarding information and technical support,
we kindly request that you direct your correspondence to our dedicated team.
Our representatives are available to assist you via email at: support@onastech.com

Or visit our website www.onastech.com

We look forward to resolving your inquiries promptly and professionally.

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