



# Thyratron Thermostat

## *"eThermostat"*

### - Installation Guide -



# 1. Safety instructions

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## What this chapter contains

This chapter contains the safety instructions which you must follow when installing, operating and servicing the **Thermostat**. If ignored, the device might be damaged and there is a risk of physical injury or even death. Read the safety instructions before you work on the unit.

## Use of warnings and notes

There are two types of safety instructions throughout this manual: warnings and notes. Warnings caution you about conditions which can result in serious injury or death and/or damage to the equipment. They also instruct you how to avoid the danger. Notes draw attention to a particular condition or fact, or give information on a subject. The warning symbols are used as follows:



Dangerous voltage warning warns for high voltage which can cause physical injury and/or damage to the equipment.



General warning warns about conditions, other than those caused by electricity, which can result in physical injury and/or damage to the equipment.



Electrostatic discharge warning warns for electrostatic discharge which can damage the equipment.



Hot surface warning warns for hot surfaces which can cause physical injury.

## **1.1. Installation and maintenance work**

These warnings are intended for all who work on the Thermostat, or electric cables.

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**WARNING!** Ignoring the following instructions can cause physical injury or death, or damage to the equipment:

- Only qualified personnel are allowed to install and maintain the Thermostat.
- Never work on the Thermostat or electric cables when main power is applied.
- Do not work on the cables when power is applied to the device or to the external control circuits. Externally supplied control circuits may arise dangerous voltages inside the device even when the main power on the drive is switched off.
- Do not make any insulation or voltage endurance tests on the device.
- When reconnecting the wiring, always check that the phase order is correct.
- Do not change the electrical installations of the Thermostat. Changes may affect the safety performance or operation of the device unexpectedly. All customer-made changes are on the customer's responsibility.

## 1.2. Mechanical installation and maintenance

These instructions have to be read and understood by all personnel who take part at the installation and service procedures of the Thermostat.

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**WARNING!** Ignoring the following instructions can cause physical injury or death, or damage to the equipment:

- Handle the unit carefully.
- It has to be installed in an area where the access to it is impossible without disassembling the structure of that specific enclosing area of the host appliance.
- The **Thermostat** consists at least of two parts, the **Thermostat** itself, the **NTC thermistor**. None of these parts are serviceable or repairable.
- Make sure that dust from borings and grindings does not enter the drive when installing. Electrically conductive dust inside the unit may cause damage or malfunctions.
- Ensure for adequate cooling.
- Do not fasten the device by welding.

## 1.3. Printed circuit board

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**WARNING!** Ignoring the following instructions may cause damage to the printed circuit board:



- The printed circuit board features on it components sensitive to electrostatic discharge. Wear a grounding wrist band when handling the board. Do not touch the board unnecessarily.

### Operation

These warnings have to be read and understood by all authorized personnel who operate the PCB.

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**WARNING!** Ignoring the following instructions may cause physical injury or death, or damage to the equipment:

- Before powering the device check the wiring.

## 2. Mechanical installation

### What this chapter contains

This chapter contains unpacking information and the mechanical installation instructions of the device.

### 2.1 Unpacking of the unit

The **Thermostat** is delivered in a cardboard box.

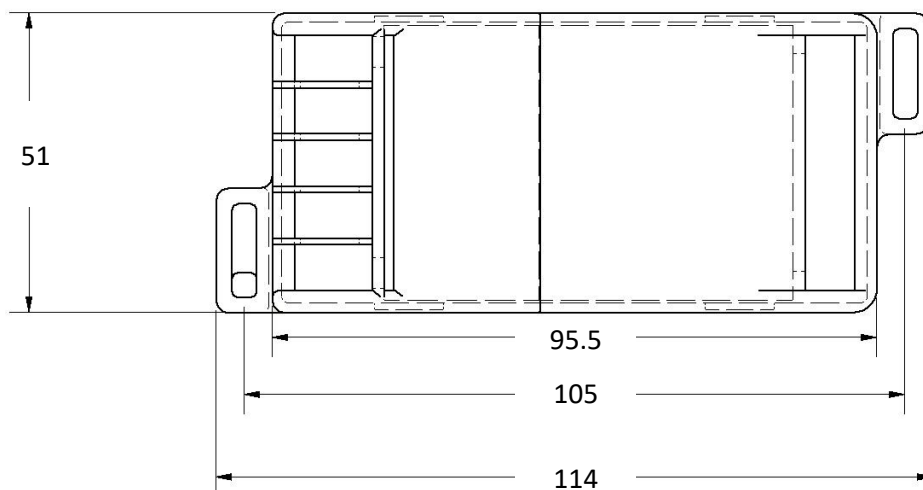
### 2.2 Installation

The device must be installed in an upright position (see image at the side).

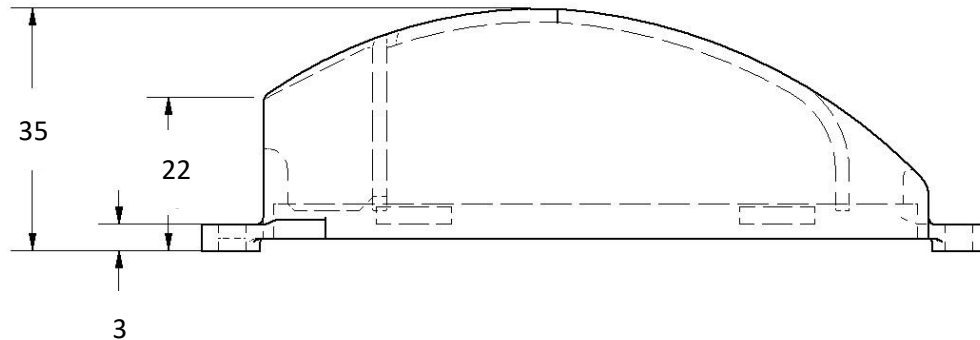


### 2.3 Dimensions drawings for the Thermostat

Front view



All dimensions are given in mm.

**Side View**

All dimensions are given in mm.

## 3. Electrical installation

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### What this chapter contains

This chapter describes the electrical installation procedure of the Thermostat.



**WARNING!** The procedure described in this chapter may only be carried out by a qualified electrician. Follow the Safety instructions on the first pages of this manual. Ignoring the safety instructions may cause injury or death. Make sure that the device is disconnected from the mains (input power) during installation.

### 3.1 Checking the insulation of the installation

#### Device

Do not make any insulation resistance tests on any part of the Thermostat as testing can damage the device.

#### Supply cable

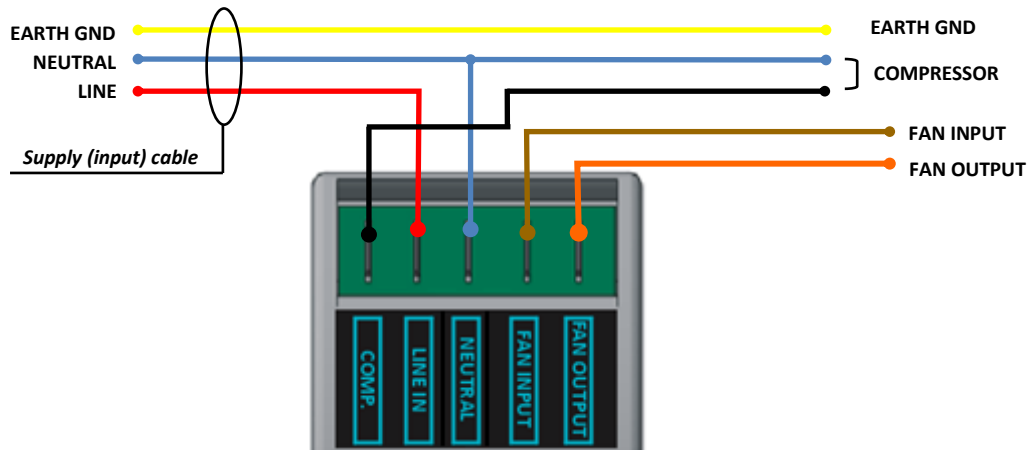
Check the insulation of the supply (input) cable according to local regulations before connecting to the Thermostat.

### 3.2 Connection Diagram

Check the insulation of the supply (input) cable according to local regulations before connecting to the ECU.

PPS WAVE is intended to be used with the protection of a fuse gG, type B, IEC60269-3-1.

Confirm compatibility with connection terminals as well as insulation. The connectors are Fast On terminals 6.3x0.8mm.



### 3.3 Electrical and Accessories Connection Diagram

Fan Out	Remote Status Indicators (LEDs) / Programming Serial Port 9600/8/N/1	Port B
Fan In		Port A
NEUTRAL	Temperature Sensor 2 / Selection Switch / Door sensor/ Temperature Adjustment )	Port A
LINE IN		Sensor
COMPRESSOR	Temperature Sensor 1	Sensor



The product this installation guide describes is subject to change without prior notice, due to the manufacturer's continuous development program.

## **Further Information**

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