

# **IP TH Sensor**

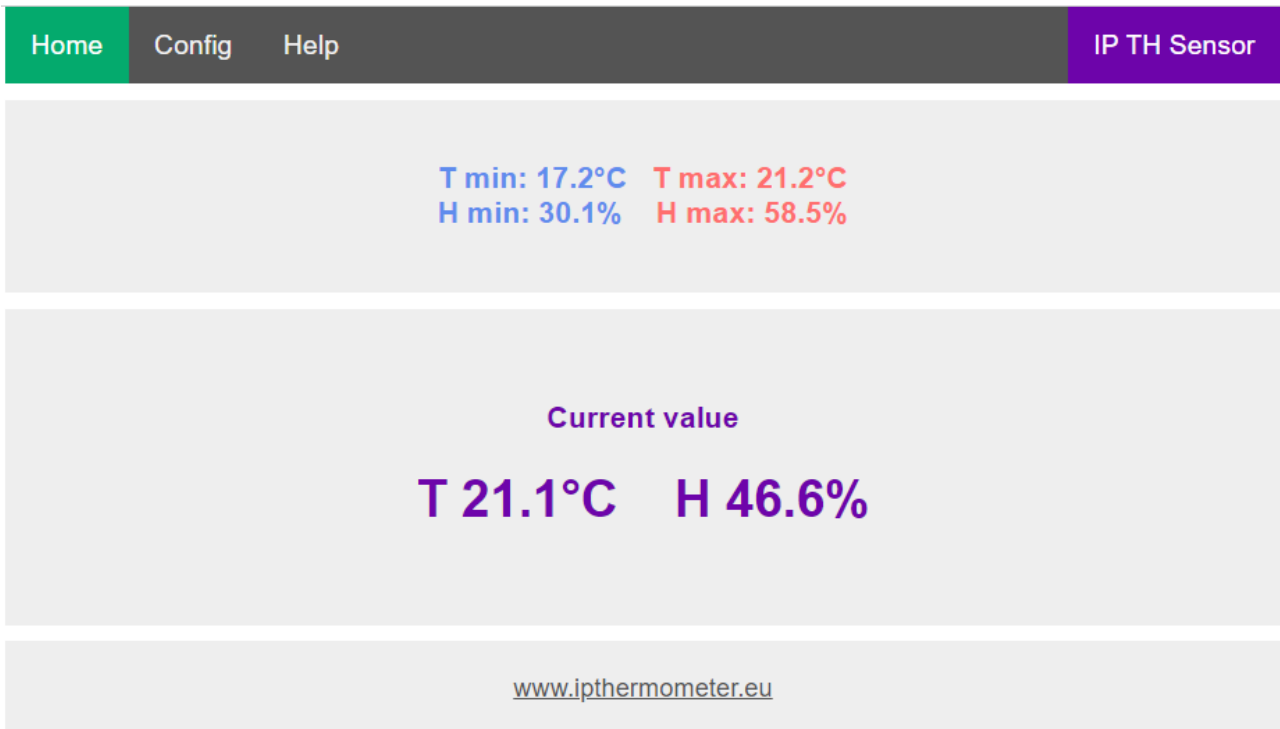
## **User Manual**

## Table of Contents

About device.....	3
Key Features of the IP TH Sensor.....	4
Options for retrieving data from the IP TH Sensor.....	4
Web Page.....	4
JSON.....	4
HTTP GET.....	5
Send Data to Remote Server.....	5
Connect to your IP TH Sensor.....	5
DHCP.....	5
Static IP.....	6
WEB Interface.....	6
Device configuration.....	7
Sensor config.....	7
HTTP GET / IFTTT.....	8
Restore factory settings.....	8
Integration with other software.....	9
Java.....	9
GO.....	9
PHP.....	10
Python.....	10
CURL.....	10
PRTG Network monitor.....	10
ZABBIX.....	11
IFTTT.....	11
Troubleshooting.....	11

## About device

Introducing our IP TH Sensor, an intelligent solution for precise temperature and humidity monitoring. This advanced device seamlessly integrates with IFTTT, ZABBIX, PRTG, and other systems, ensuring compatibility with your preferred setups. Featuring a user-friendly design, it incorporates an internal web server for seamless data viewing and configuration. Retrieve data with ease through simple requests or let the device autonomously push information to servers, ensuring real-time insights. Versatile and adaptable, it's ideal for server rooms, homes, offices, or any space requiring temperature and humidity monitoring. Experience the perfect blend of simplicity and reliability as our device effortlessly integrates into diverse systems, providing unparalleled ease of use for comprehensive environmental control.



## Key Features of the IP TH Sensor

- Highly accurate [SHT30](#) sensor with fully calibrated, linearized, and temperature-compensated digital output.
- Wide operational range: -40°C to 125°C for temperature and 0%RH to 100%RH for humidity.
- Accuracy:  $\pm 0.3$  °C (0°C – 65°C) for temperature and  $\pm 3$  %RH (10%RH – 90%RH) for humidity.
- Compatible with IFTTT, ZABBIX, PRTG Network Monitor, and other software for seamless integration.<sup>1</sup>
- Complete solution with no soldering or additional parts required (except for USB power supply).
- Internal web server with password-protected configuration for easy viewing and setup.
- Supports both DHCP and Static IP (DHCP by default).
- Provides Min-Max readings for temperature and humidity.
- Fahrenheit/Celsius selectable for user preference.
- Effortless integration with other software for a smooth monitoring experience.
- Comes with a convenient 1m probe cable.
- Operates independently of external services like Sonoff, ensuring functionality in a local network without internet dependency.

## Options for retrieving data from the IP TH Sensor

### Web Page

Simply input the device's IP address into your web browser to access a user-friendly interface. From here, effortlessly view data on the website and customize device settings, including IP and password, with optimized compatibility for both desktop and mobile devices.

### JSON

Retrieve JSON data from `http://[device_IP]/prtg` to obtain temperature and humidity readings. The information is easily parseable and can be utilized for diverse purposes. PRTG directly supports this JSON format.

---

<sup>1</sup> IP TH sensor is fully compatible with IFTTT, but please note that we cannot guarantee or take responsibility if the service provider decides to change the API or discontinue the service, making the IP TH sensor no longer compatible with IFTTT. As far as we know, IFTTT has no such plans.

## HTTP GET

Execute a simple HTTP GET request to `http://[device_ip]/t` for temperature data and `http://[device_IP]/h` for humidity data. Receive plain numerical values without the need for parsing, ensuring easy integration.

## Send Data to Remote Server

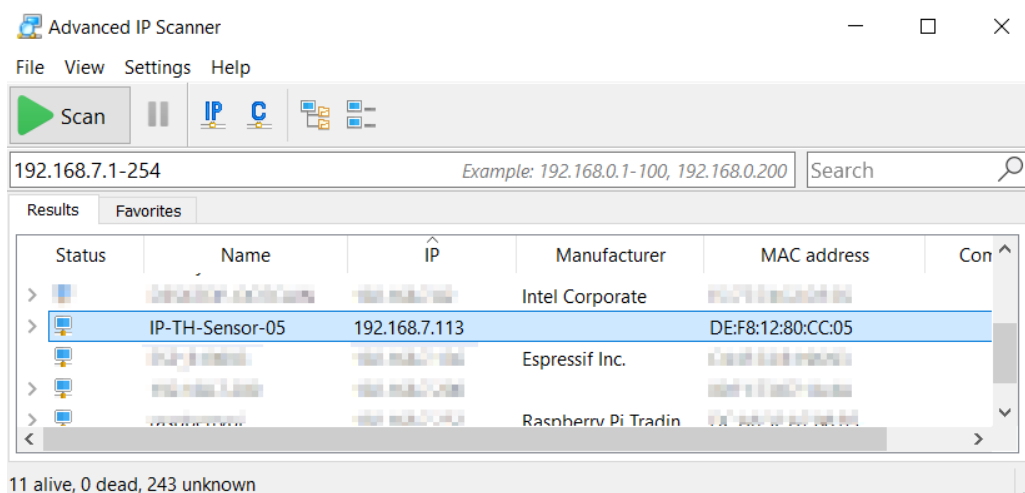
Transmit data from the device to a remote server via HTTP GET requests. Temperature and humidity data are integrated into the request as parameters. Data can be sent at intervals you define or when readings exceed the range specified in the device configuration. IP TH Sensor supports IFTTT service via webhooks, empowering you to automate actions such as sending emails at predetermined intervals or when data reaches specific thresholds. Please note that HTTPS is not supported. For a detailed guide on IFTTT configuration, refer to our video at [www.ipthermometer.eu](http://www.ipthermometer.eu)

## Connect to your IP TH Sensor

Connect device to your LAN network using standard network cable and use the included mini USB cable to connect the device to the USB power supply. As power supply can be used PC, server USB port or phone charger.

## DHCP

If your network router supports the DHCP protocol, the device will automatically obtain an IP address. To identify the assigned address for the sensor, you can check your router's admin panel or utilize a network scanner. For Windows, you can use [www.advanced-ip-scanner.com](http://www.advanced-ip-scanner.com), a free and effective tool. Simply download, install, and click "Scan". The device name is IP-TH-Sensor-xx, and beside it is the sensor's IP address. Once you have the address, proceed to the next section, "WEB Interface."



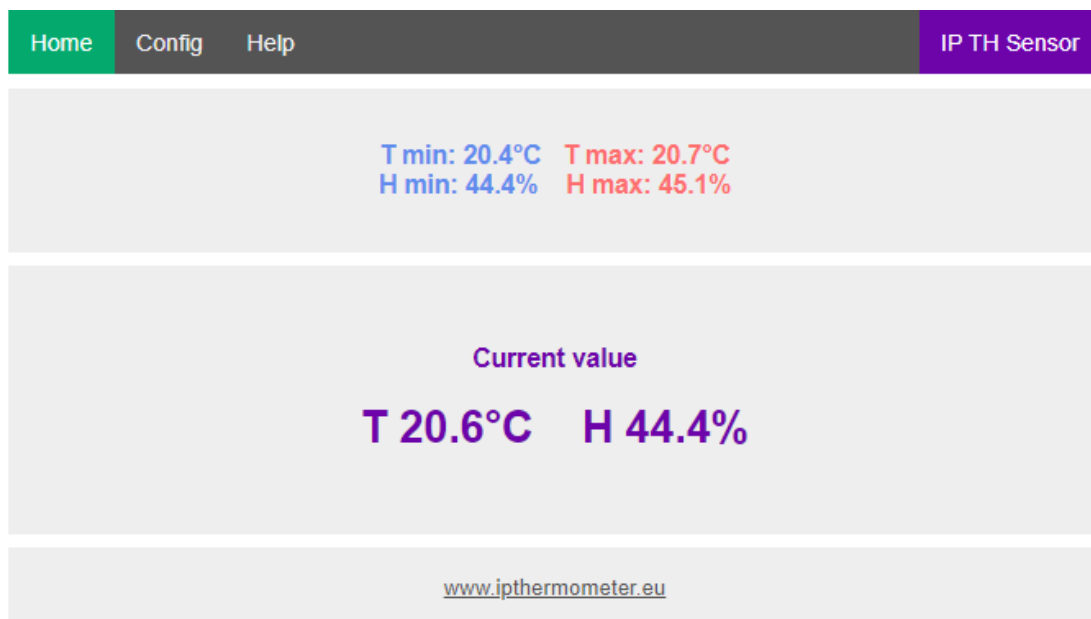
## Static IP

If your LAN lacks a DHCP server, the thermometer will autonomously assign a static IP address within 1-2 minutes. The default static IP address is 192.168.7.123. To access the thermometer, ensure your computer, or other device you use to access thermometer is on the same network segment. Adjust your devices's IP address as follows: IP: 192.168.7.1 MASK: 255.255.255.0

Changing the PC's, Mac, or Android IP address varies depending on the operating system and its version. For guidance, please search on Google or YouTube, where numerous tutorials are available. Alternatively, you can contact us at [www.ipthermometer.eu](http://www.ipthermometer.eu).

## WEB Interface

Once you have the sensor's IP, simply enter it into your favorite web browser, whether on a PC or mobile device. You will see a user-friendly web interface as shown in the image below. This interface is thoughtfully designed for smooth navigation on both desktop and mobile devices with a lightweight and minimalistic design.



Here, you can view real-time temperature and humidity values, along with the corresponding minimum and maximum values. The Min-Max values are reset when the device is restarted, the configuration is modified and saved, or "[reset min-max]" is selected in the configuration menu. The web interface automatically refreshes at predefined intervals set in the configuration menu, default value is 5 seconds.

## Device configuration

Select the **Config** menu in the web interface, enter password (default is: 1234) and you should see the device configuration, which consists of two parts, **Sensor Config** and **HTTP GET / IFTTT**, like in picture below:

Home
Config
Help
IP TH Sensor

### Sensor config

---

DHCP:

IP:

MASK:

Gateway:

DNS:

Temp units: Celsius ▼

Refresh WEB:  (1..3600s)

Password:   
[\[reset min-max\]](#)

### HTTP GET / IFTTT

---

Send data: at set interval (sec) ▼  -

Base Url:

Params:

Port:

[www.ipthermometer.eu](http://www.ipthermometer.eu)

### Sensor config

This section allows you to set the device's IP address, choose temperature units (C/F), specify the web refresh interval, and set a password.

## HTTP GET / IFTTT

This section lets you configure how data is sent to a remote server, configure IFTTT or similar service.

- **Send data:** choose when data should be sent to the server: either at set intervals or when temperature or humidity exceeds the configured range. If "**at set interval**" is chosen, enter the interval in seconds in the field on the right. If "**when T out of interval**" is selected, you will see two fields to enter the temperature or humidity range (from - to). When the temperature or humidity falls outside this range, the data will be sent to the server once. If the temperature or humidity returns to the range and goes out again, the data will be sent again.
- **Base Url:** enter your server's domain name or IP address without any slash symbols, as shown in the picture above. Please note that HTTPS is not supported.
- **Params:** enter the second part of your server URL that contains parameters. Instead of symbols **\$T** and **\$H**, the temperature and humidity will be inserted automatically.
- **Port:** specify your server's port number.

## Restore factory settings

If you are unable to connect to the device, forget the password, or if the device becomes unresponsive, please press the reset button for 5 seconds while the device is connected to the power supply.





## Integration with other software

URL to get temperature: `http://device_IP/t`

URL to get humidity: `http://device_IP/h`

### Java

```
URL url = new URL("http://device_IP/t");
URLConnection yc = url.openConnection();
BufferedReader in = new BufferedReader(new InputStreamReader(yc.getInputStream()));
String inputLine;
while ((inputLine = in.readLine()) != null) {
    System.out.println(inputLine);
}
in.close();
```

### GO

```
package main

import (
    "fmt"
    "net/http"
    "io"
)

func main() {
    url := "http://device_IP/t"
    fmt.Println(url)
    var client http.Client
    resp, err := client.Get(url)
    if err != nil {
        fmt.Println(err)
    }
    defer resp.Body.Close()

    if resp.StatusCode == http.StatusOK {
        bodyBytes, err := io.ReadAll(resp.Body)
        if err != nil {
            fmt.Println(err)
        }
        sensorData := string(bodyBytes)
        fmt.Println(sensorData)
    }
}
```

## PHP

```
<?php
    $url = 'http://device_IP/t';
    $temp = file_get_contents($url);
    echo($temp);
?>
```

## Python

```
import urllib2
response = urllib2.urlopen('http://device_IP/t')
temp = response.read()
```

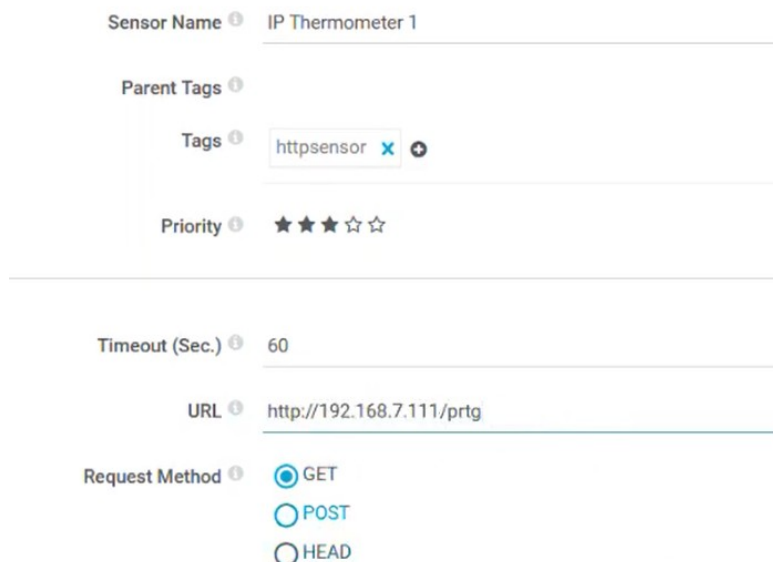
## CURL

```
curl device_IP/t
```

## PRTG Network monitor

To integrate this sensor with PRTG, configure the sensor type as "**HTTP Data Advanced**" and set the URL to "http://[device\_IP]/prtg".

Go to **Add Sensor...** -> **HTTP Data Advanced** and fill form like this:



The screenshot shows the configuration form for a PRTG sensor named "IP Thermometer 1". The form includes the following fields and options:

- Sensor Name:** IP Thermometer 1
- Parent Tags:** (empty)
- Tags:** httpsensor (with a close button 'x' and a plus sign '+')
- Priority:** Four stars (★★★★)
- Timeout (Sec.):** 60
- URL:** http://192.168.7.111/prtg
- Request Method:** Radio buttons for GET (selected), POST, and HEAD.

You can refer to a video tutorial available at [www.ipthermometer.eu](http://www.ipthermometer.eu) for additional guidance.

## ZABBIX

To integrate this sensor with ZABBIX go to **Configuration** → **Hosts** → **Items** → **Create item** and fill the form like this:

<h3 style="text-align: center;">Temperature</h3> <p>* Name <input type="text" value="IP TH Sensor T"/></p> <p>Type <input type="text" value="HTTP agent"/></p> <p>* Key <input type="text" value="t"/> <input type="button" value="Select"/></p> <p>* URL <input type="text" value="192.168.7.201/t"/> <input type="button" value="Parse"/></p> <p>Query fields</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Name</th> <th style="width: 50%;">Value</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><a href="#">Add</a></td> <td></td> </tr> </tbody> </table> <p>Request type <input type="text" value="GET"/></p> <p>Type of information <input type="text" value="Numeric (float)"/></p>	Name	Value	<a href="#">Add</a>		<h3 style="text-align: center;">Humidity</h3> <p>* Name <input type="text" value="IP TH Sensor H"/></p> <p>Type <input type="text" value="HTTP agent"/></p> <p>* Key <input type="text" value="t"/> <input type="button" value="Select"/></p> <p>* URL <input type="text" value="192.168.7.201/h"/> <input type="button" value="Parse"/></p> <p>Query fields</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Name</th> <th style="width: 50%;">Value</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><a href="#">Add</a></td> <td></td> </tr> </tbody> </table> <p>Request type <input type="text" value="GET"/></p> <p>Type of information <input type="text" value="Numeric (float)"/></p>	Name	Value	<a href="#">Add</a>	
Name	Value								
<a href="#">Add</a>									
Name	Value								
<a href="#">Add</a>									

You can refer to a video tutorial available at [www.ipthermometer.eu](http://www.ipthermometer.eu) for additional guidance.

## IFTTT

1. Access your IFTTT account by logging in.
2. Click on the "Create" button to create a new applet.
3. In the "If This" section, click on "Add" to set up the trigger.
4. Search for the "Webhooks" service, select it, and opt for "Receive web request".
5. Enter a name for the event.
6. In the "Then That" section, select an action for what you want to do after receiving the data. You can send email or perform other tasks.

You can refer to a video tutorial available at [www.ipthermometer.eu](http://www.ipthermometer.eu) for additional guidance.

## Troubleshooting

### ***The device reboots periodically, becomes inaccessible or restores factory settings***

The problem is usually related to a poor quality power source or USB power cable. Please replace the power supply and USB cable. If the problem persists, please contact us.