

# AthcL

## Temperature, humidity and CO<sup>2</sup>



### **DESCRIPTION**

Autonomous sensor for continuous measurement of temperature, relative humidity and CO<sup>2</sup> in a room or outdoors.

The measurement is extremely reliable and accurate and does not show any anticipated alteration even for exposures to very high levels of relative humidity (over 80%).

Each sensor is autonomous; it doesn't need another box nor a sending station

### **APPLICATIONS**

Environmental monitoring in buildings or sensitive areas.

## SENSOR CHARACTERISTICS

### DATA RECORDING

Local measurement interval	1 second (via Bluetooth application)
Data reporting interval	10 minutes (configurable)
Reported data	Air temperature around the housing Case temperature CO <sup>2</sup> in the air around the box Relative humidity of the air around the case Battery voltage

### TEMPERATURE PROBE

Measurement principle	Digital
Measuring range	-40 ... +125°C
Resolution	±0,015°C
Repeatability	±0,1°C
Long term drift	< 0.05 °C/an

### RELATIVE HUMIDITY PROBE

Measurement principle	Capacitive
Measuring range	0 ... 100 %RH
Resolution	0,02 % RH
Repeatability	±0,2 % RH
Long term drift	< 0.5 % RH/year (+23 °C, 30 ... 70 % RH)

### CO<sup>2</sup> PROBE

Measurement principle	Digital
Measuring range	400 ... 10000 ppm
Resolution	±10ppm
Repeatability	±30ppm

---

**TEMPERATURE SENSOR INSIDE THE HOUSING**

---

Measuring principle	NTC
Measuring range	-55 ... +125°C
Resolution	0,6°C (-5 ... +50°C)

---

## LONG DISTANCE RADIO

---

Radio technology	LoRaWAN
Security	AES-128 data encryption
Supported features	LoRa private or operated, OTAA
Radio range	Up to 15 km
Transmitted power	Up to 20 dBm (adaptive)
Receiver sensitivity	-142 dBm
Frequency band	868 MHz (EU), 915MHz (US, AS, AU)
Antenna	Internal or external to the housing

## LOCAL RADIO

---

Radio technology	Bluetooth Low Energy
Radio range	Up to 40m
Transmitted power	Up to 4 dBm
Receiver sensitivity	-96 dBm
Frequency band	2.4 GHz ISM
Antenna	Internal to the box

## POWER SUPPLY

Battery type	Lithium-Ion	
Power consumption	< 1mW	
Battery life *	Measurement period	Duration (up to)
	10 minutes	5 years
	20 minutes	10 years
	30 minutes	15 years
	1 hour	15 years

\* Indicative duration, for use in the conditions of use

## SENSOR

Operating temperature	-30 ... +85°C
Dimension	105 x 105 x 60 mm
Weight	280g
Internal memory	1024 measurements
Case	Polycarbonate (weather, UV and impact resistant)
	Decompressor against condensation
	IP65, IK07
	Fixing brackets

## ORDER REFERENCES

### ORDER REFERENCES

---

Athcl-01

temperature, relative humidity and CO<sup>2</sup> sensor

Other option: contact us

## **WARNINGS**

Specifications and information in this document are subject to change without notice.

A3IP products are not warranted or licensed for use as a critical component for medical or other life-saving or life-sustaining applications, or other applications where failure could reasonably be expected to cause serious injury, death, or damage to any structure, work or building.

In addition, devices are indications and decision aids and cannot be used in alarm or critical applications.

## **CONTACT**

<https://www.a3ip.com>

[contact@a3ip.com](mailto:contact@a3ip.com)

+33 (0)2 40 94 78 41

A3IP  
Bâtiment Placel  
Route de Vannes  
44880 SAUTRON  
France