Environmental Measurements
Real Time Automated Actions Based on Sensor data

We offer a broad set of sensors like humidity, CO2, Air Quality, light, ground moisture, temperature of tubes, water levels, liquid volumes, movement detection, air pressure and more. This data is encrypted and transferred to our cloud server for analysis and initiation of custom automated actions. As such you are able to control your environment based on sensor data.

CO2, Temperature & Humidity Measurement Unit

The data can be transferred via NBIoT, GSM, Lora, ModBus RS485, WiFi & Ethernet communication types. All HTTP and MQTT data streams are encrypted following the AES-256 CBC standard.

In order to overcome data loss in case of communication problems we keep data on local SD storage which is flushed to the database once the connection has been re-established.

Our IoT board contains three relays to steer local devices. A rule system is foreseen on the cloud application server where automated actions can be configured. In case an immediate action is required you can manually trigger one too.

The measurement interval is configurable.

Who Uses It ?

Any organization that needs to follow-up one or more environmental parameters for historical analysis or local action.

For What ? Some Examples...

You want to measure the CO2 of meeting rooms, indicate levels and steer aeration.

Air quality in industrial environments is important for your workers. Steer ventilation when critical levels are reached. We can also trigger an alarm or visualize a message on a ledmatrix display.

Imagine you have two or more water reservoirs and want to know the volumes available for usage. With our technology it is possible to steer pumps based on measured levels.
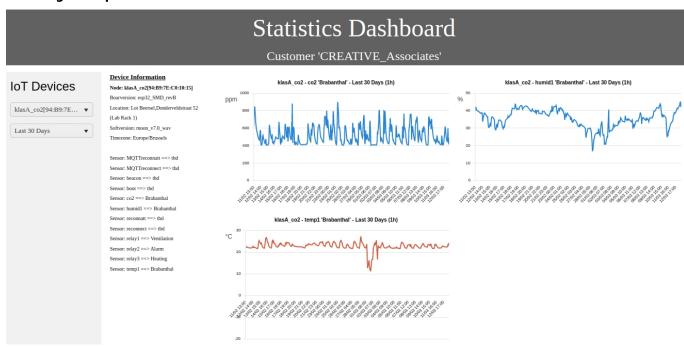
Green houses have the need for temperature, light, humidity and moisture level measurements. Activate artificial light and irrigation systems in an automated way.

Do you want to know if a meeting room is occupied ? Use our motion detection sensor to get the actual status.

Heavy rainfall could introduce a problem by rivers that overflow. Measure these levels and automate actions like opening valves to derive water into holding basins preventing floods.

If you have refrigerators that need to be monitored with alerting when the temperature is getting too high, this may be a solution for you.

Charting Example

Statistics Dashboard
Customer 'CREATIVE_Associates'

IoT Devices

klasA_co2[94:B9:7E... ▼

Last 30 Days ▼

Device Information

Node: klasA_co2[94:B9:7E:C0:10:15]
Boarversion: esp32_SMD_revB
Location: Lot Beersel,Donderveldstraat 52 (Lab Rack 1)
Softversion: moon_v7.0_wav
Timezone: Europe/Brussels

Sensor: MQTTreconnatt ==> tbd
Sensor: MQTTreconnect ==> tbd
Sensor: beacon ==> tbd
Sensor: boot ==> tbd
Sensor: co2 ==> Brabanthal
Sensor: humid1 ==> Brabanthal
Sensor: reconnatt ==> tbd
Sensor: reconnect ==> tbd
Sensor: relay1 ==> Ventilation
Sensor: relay2 ==> Alarm
Sensor: relay3 ==> Heating
Sensor: temp1 ==> Brabanthal

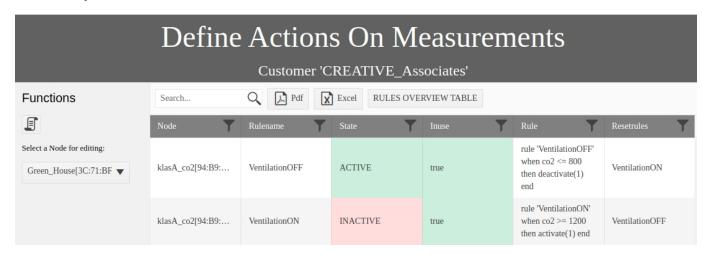**CREATIVE Associates Environmental Measurements Product Data Sheet**

In order to look at your data we have implemented a charting feature where you can select the IoT device of interest and the reporting period. All sensors related to that device will appear.

When hoovering over the chart the actual value and time pops up.

At the left side you find the connected sensor names and relay devices with their context which is configurable so that you can add extra information.

We foresee an API in order to extract this data for external usage within your company software platform.

Rule Example

Define Actions On Measurements
Customer 'CREATIVE_Associates'

Functions

Select a Node for editing:

Green_House[3C:71:BF ▼

Search... 🔍 📄 Pdf   📊 Excel   RULES OVERVIEW TABLE

Node	Rulename	State	Inuse	Rule	Resetrules
klasA_co2[94:B9:...	VentilationOFF	ACTIVE	true	rule 'VentilationOFF' when co2 <= 800 then deactivate(1) end	VentilationON
klasA_co2[94:B9:...	VentilationON	INACTIVE	true	rule 'VentilationON' when co2 >= 1200 then activate(1) end	VentilationOFF

With our rule engine you are able to define actions that will be triggered by sensor data getting above or under a specific threshold.

Once the threshold has been reached the related relay will receive a command to be activated or de-activated. Via a status page you are able to see the current state and we keep a state change log for audit purposes.

In case an immediate action is required we offer a command page where you can manually trigger a relay action.

CREATIVE Associates
MEASURE & CONTROL