

stgQAI

**Indoor air
quality control.**



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Overview

CONTROLLER

The **stgQAI** is an **Indoor Air Quality (IAQ)** controller. It measures the air conditions of the room, classifies the quality of each variable and calculates the ventilation demand needed to keep them at the configured values. This demand drives the unit's own 0–10 Vdc outputs and relay and can also be sent wirelessly to another STG unit, such as the **stgDRV**.

VARIABLES AND SENSOR COMBINATIONS

The controller leaves the factory configured for one of the six combinations below, as ordered. Variables that are not part of the installed combination simply do not appear on the web interface or the HMI.

COMBINATION	WHAT IT MEASURES
CO ₂	CO ₂
CO ₂ + T + H	CO ₂ , temperature and humidity
MULTI	CO ₂ , temperature, humidity, PM2.5 and VOC
CO	CO
CO + T + H	CO, temperature and humidity
T + H	Temperature and humidity

HOW THE CONTROL WORKS

1. Each continuous variable (temperature, humidity, CO₂, CO and PM2.5) has a setpoint. A PI control calculates the **ventilation demand** (0 to 100 %) from the distance between the reading and the setpoint.
2. **VOC** works by levels: the sensor itself classifies the air from 0 to 3, and each level has a fixed, adjustable ventilation demand.
3. Each analog output can be assigned to one or more variables and always applies the **highest** demand among them. Example: if temperature asks for 30 % and CO₂ for 70 %, the output goes to 70 %.
4. From factory, the **relay** switches on whenever any output is above 0 %. Other relay functions depend on factory configuration.
5. When the controller drives an **stgDRV** wirelessly, it sends the highest demand among all outputs.

AIR QUALITY CLASSIFICATION

CO₂, CO, PM2.5 and VOC receive a four-level classification. The factory limits follow references such as ASHRAE 62.1 and NBR 16401 (CO₂), the EPA 1-hour limit (CO) and CONAMA Resolution 491/2018 (PM2.5), and can be adjusted:

VARIABLE	OPTIMAL (GREEN)	GOOD (YELLOW)	SLIGHTLY SATURATED (ORANGE)	VERY SATURATED (RED)
CO ₂ (ppm)	< 800	800 to 1100	1100 to 1400	> 1400
CO (ppm)	< 15	15 to 35	35 to 60	> 60
PM2.5 (µg/m ³)	< 25	25 to 50	50 to 75	> 75
VOC	level 0	level 1	level 2	level 3

Temperature and humidity do not use this scale: they show **comfort** (below ideal, adequate or above ideal) relative to their setpoints.

NETWORK ROLES

The stgQAI has four 0–10 Vdc analog outputs, one relay with NO, COM and NC contacts, Modbus RTU and a 4.3" touch display (HMI). On the STG wireless network, each unit works as:

- **Master:** keeps setpoints and parameters, consolidates local and slave readings, classifies air quality by the worst valid variable, calculates the demands and drives the local outputs or the stgDRV.
- **Slave:** measures and sends its readings to the master and shows the overall level received from it. It has no setpoint or control of its own.

A master receives up to **5 slaves** and drives up to **5 stgDRV** units. One number does not reduce the other: with 1 or 5 slaves, the master still drives up to 5 stgDRV units. Each stgDRV can also pass the command on to up to 5 other stgDRV units.

COMMUNICATION

- **STG wireless communication** between master, slaves and stgDRV.
- **Modbus RTU** (RS-485), for integration with Building Management Systems (BMS).
- **Web interface** through its own Wi-Fi access point, in Portuguese, English or Spanish.

Technical Specifications

FEATURES

FEATURE	VALUE
Enclosure	Room, wall-mounted, with 4.3" touch display (HMI) (white)
Network role	Master or slave
Variables	According to the sensor combination (Sensors section)
Supply voltage	24 Vdc (dual-voltage plug-in power supply included)
Power connector	Screw terminal (+24V/GND)
0–10 Vdc analog outputs	4 (AO0 to AO3)
Relay	1, dry contact (NO / COM / NC)
Modbus RTU (RS-485)	Yes, slave
STG wireless communication	Yes, with up to 5 slaves and up to 5 stgDRV units
Web interface	Yes, via 2.4 GHz Wi-Fi access point
Interface languages	Portuguese, English and Spanish

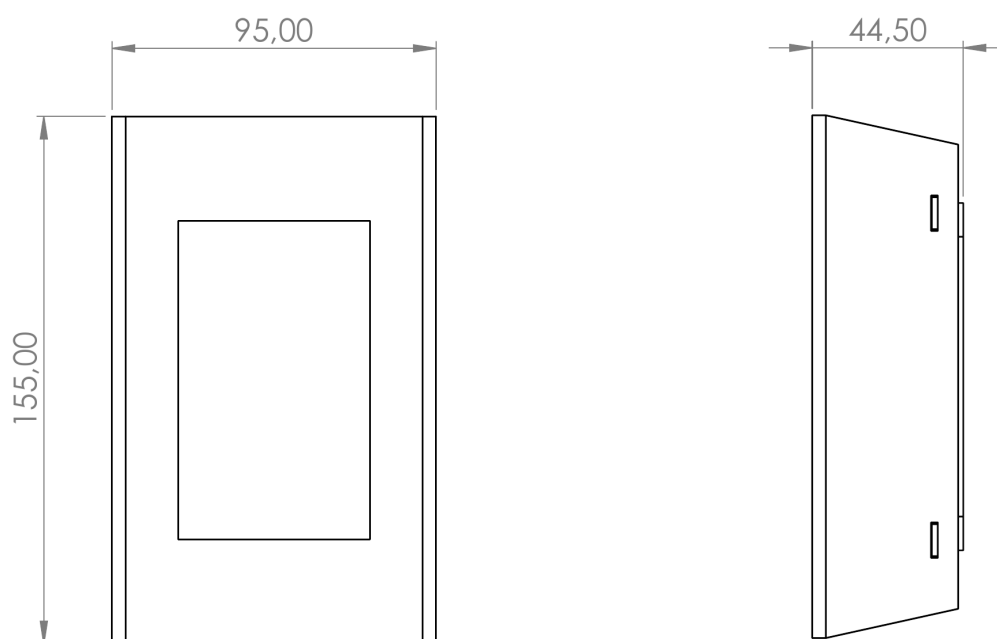
SENSORS

VARIABLE	MEASURING RANGE
Temperature	0 to 45 °C
Relative humidity	0 to 100 % RH
CO ₂	400 to 5000 ppm (MULTI) · 400 to 10000 ppm
CO	0 to 500 ppm
PM2.5	0 to 1000 µg/m ³
VOC	4 levels (0 to 3)

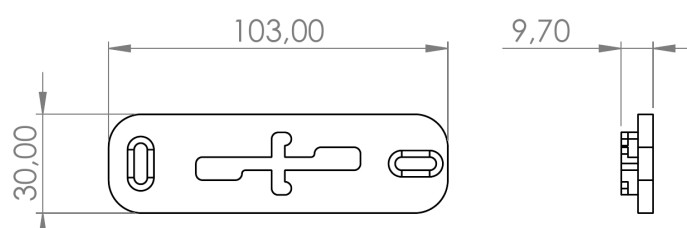
The sensor combination is defined when ordering (see *Variables and sensor combinations*).

DIMENSIONS

Room enclosure with 4.3" HMI, white. Dimensions in millimeters.



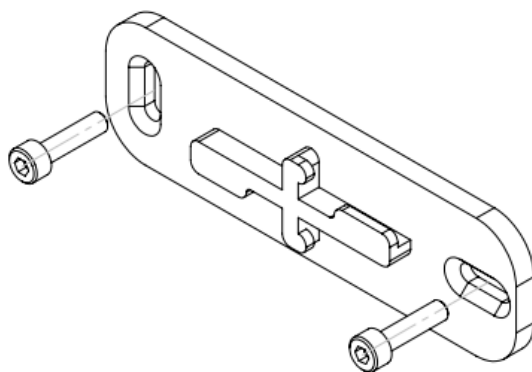
Wall bracket



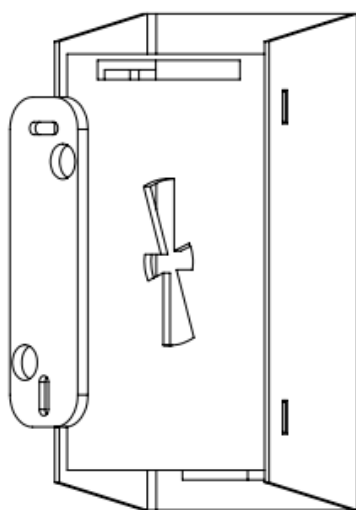
Mounting and Connections

MOUNTING

1. **Fix the bracket to the wall:** use the screw pattern that best suits your application.



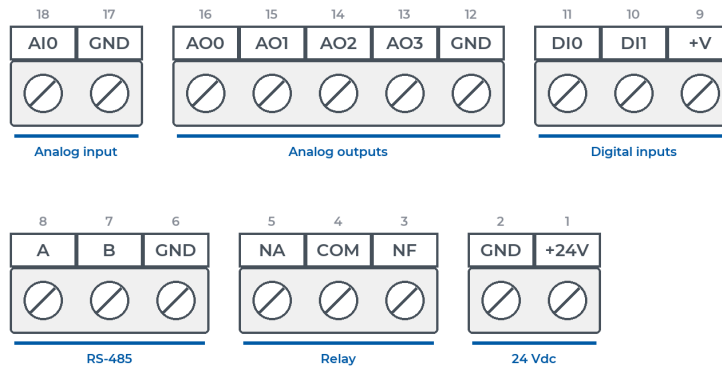
2. **Attach the controller:** slide the unit onto the bracket already fixed to the wall.



Install the controller at the occupants' breathing height, away from doors, windows, air outlets and heat sources, so that the readings represent the room.

ELECTRICAL CONNECTIONS

Important: make all connections with the unit de-energized and always check the board silkscreen before connecting any wire. The unit is powered from 24 Vdc only: check the polarity before powering up.



NO.	TERMINAL	FUNCTION
1	+24V	24 Vdc power supply (+)
2	GND	Power supply 0 Vdc (–)
3	NF	Relay: normally closed contact (NF)
4	COM	Relay: common contact
5	NA	Relay: normally open contact (NA)
6	GND	RS-485 reference (optional)
7	B	Modbus RTU RS-485 (B)
8	A	Modbus RTU RS-485 (A)
9	+V	Not used
10	DI1	Not used
11	DI0	Not used
12	GND	Analog outputs common
13	AO3	0–10 Vdc output: Analog Output 3
14	AO2	0–10 Vdc output: Analog Output 2
15	AO1	0–10 Vdc output: Analog Output 1
16	AO0	0–10 Vdc output: Analog Output 4
17	GND	Analog input common
18	AI0	Not used

Notes:

- The unit comes with a dual-voltage 24 Vdc plug-in power supply for a standard wall outlet. Connect the supply output to terminals **+24V** and **GND** (1 and 2), checking the polarity.
- On the interface, the outputs appear as **Analog Output 1 (AO1)**, **2 (AO2)**, **3 (AO3)** and **4 (AO0)**: the label in parentheses is the board terminal. Always follow the terminal when wiring or measuring an output.
- The relay has dry **NO** (**NA** on the board), **COM** and **NC** (**NF** on the board) contacts: the load must have its own supply.
- The display (HMI) comes mounted on the cover and connected to the board's HMI connector.

Operation

WEB INTERFACE

The stgQAI creates its own 2.4 GHz Wi-Fi network and can be accessed from any modern browser, on a phone or a computer.

Accessing the web interface

1. **Find the Wi-Fi network:** the network name is **stgQAI-<serial number>**, where the serial number is the one on the unit label.
2. **Connect to the network:** select the network and enter the password "**123456789**".
3. **Open the web interface:** in the browser, type the address **192.168.4.1** in the address bar.



NOTE: if the page does not load, check that your device is still connected to the controller network and turn off mobile data. On Android phones, mobile data may take over when the Wi-Fi network has no internet access.

Access levels

- **Viewer (default):** open view, no login. Shows readings, classification and output states. Nothing can be changed.
- **Administrator:** requires login. Allows changing setpoints, gains, classification limits, outputs, communication and network settings.

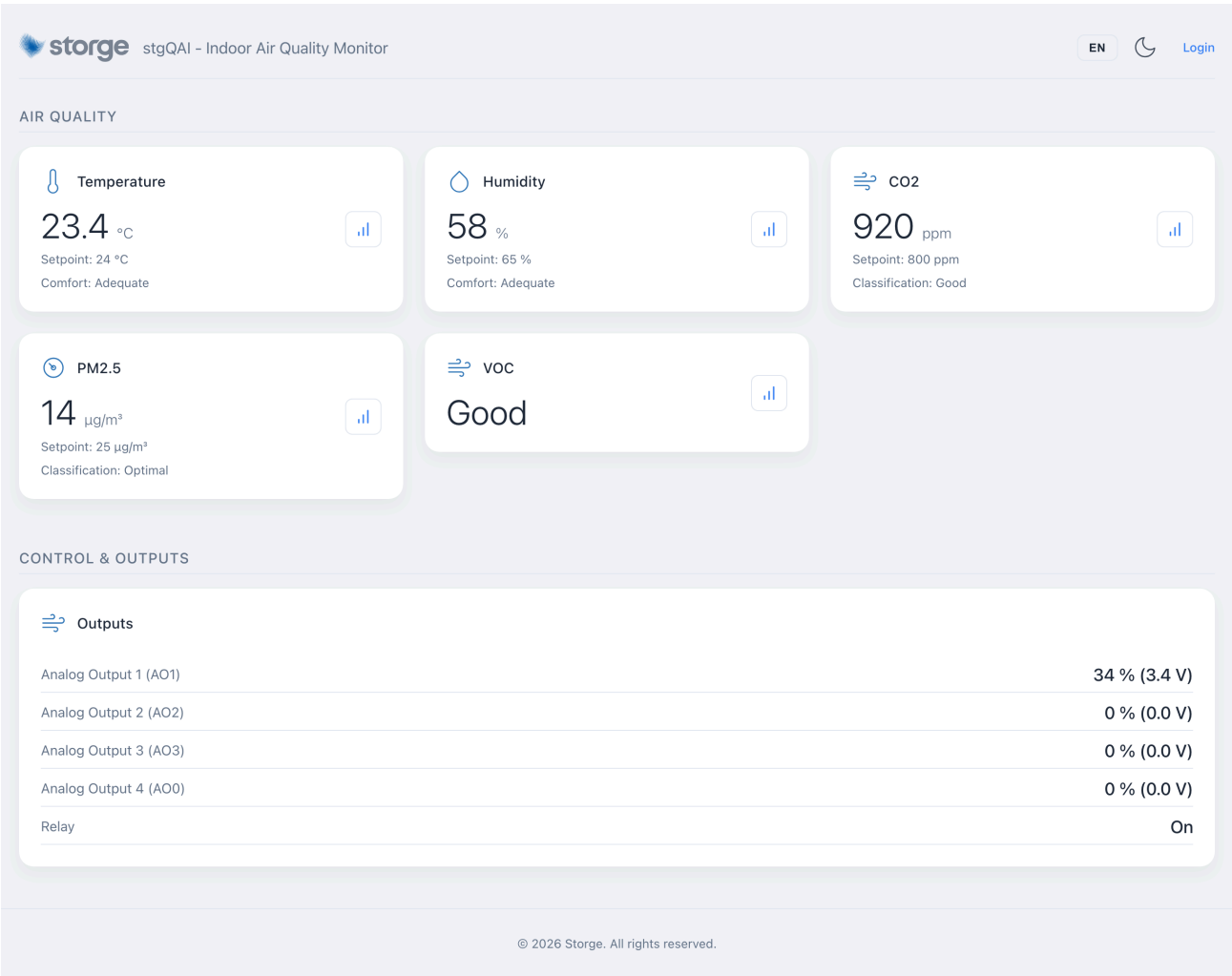
Factory commissioning

At the factory, Storge configures the network **role** of the unit (master or slave) and the **sensor combination**. The interface then shows only the functions that exist in that configuration; variables that are not part of the combination do not appear. Commissioning is not available to the administrator.

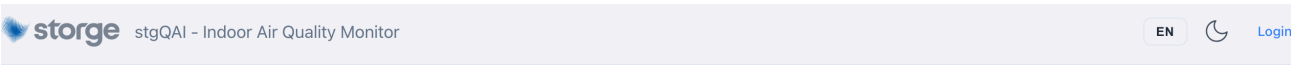
If the interface shows the banner "**Unit not commissioned**", the functions are locked. In that case, contact Storge technical support.

Main dashboard

This is the screen shown when the interface opens, at Viewer level (example with the MULTI combination):



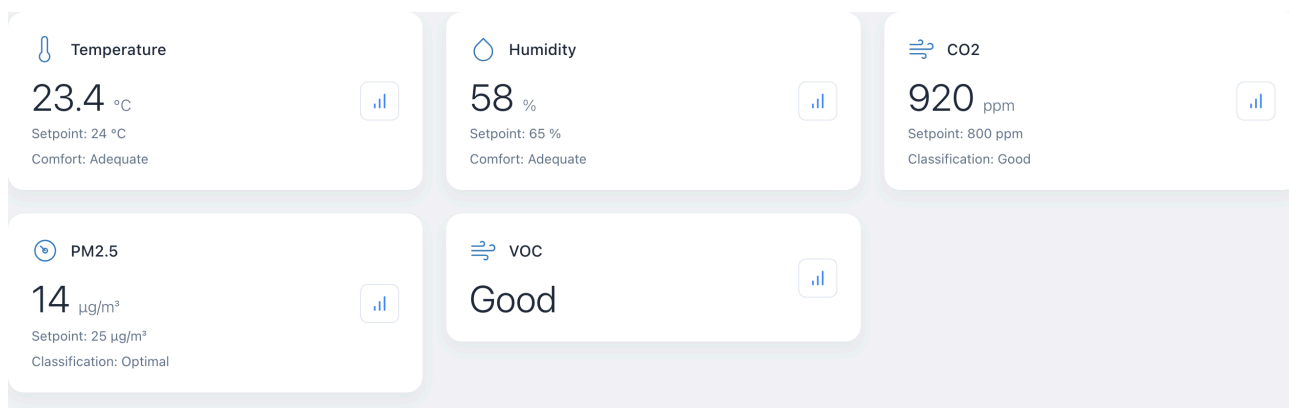
Header



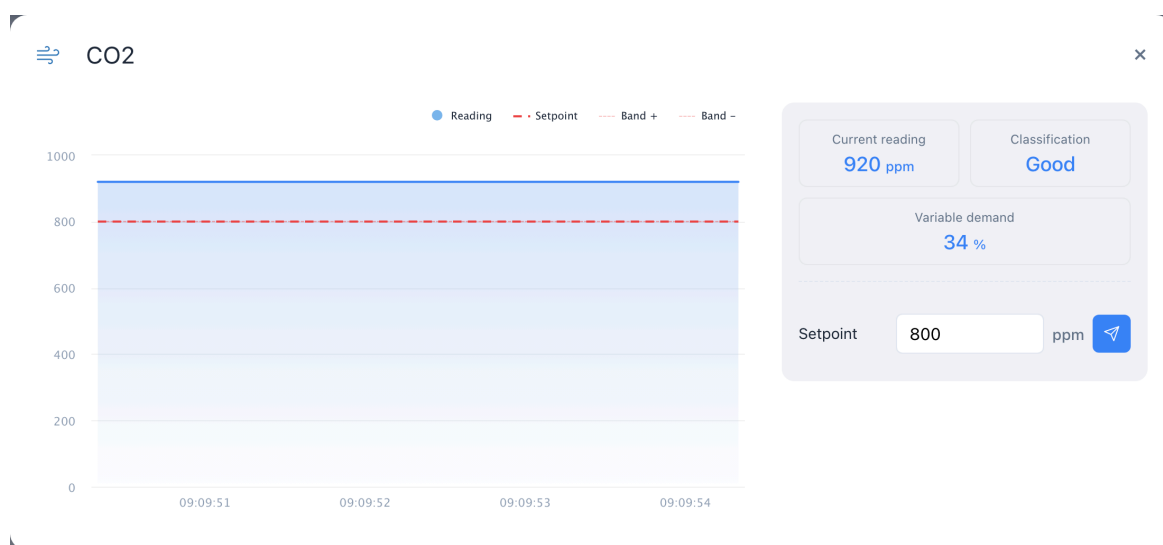
- **Language (PT / EN / ES):** switches the interface language; the choice is stored in the unit.
- **Moon icon:** switches between light and dark themes.
- **Login:** access to the Administrator level.

Air quality

One card per variable of the installed combination, with the current reading, the setpoint and the **classification** (CO₂, CO, PM2.5 and VOC) or the **comfort** (temperature and humidity):



Click the chart icon of a card to see the history of the variable, its classification and the ventilation demand:



Control and outputs

The **Outputs** card shows the value applied to each of the four analog outputs, in % and in volts, and the relay state. The outputs appear as **Analog Output 1 (AO1)**, **2 (AO2)**, **3 (AO3)** and **4 (AO0)**, where the label in parentheses is the board terminal.

Outputs	
Analog Output 1 (AO1)	34 % (3.4 V)
Analog Output 2 (AO2)	0 % (0.0 V)
Analog Output 3 (AO3)	0 % (0.0 V)
Analog Output 4 (AO0)	0 % (0.0 V)
Relay	On

Administrator login

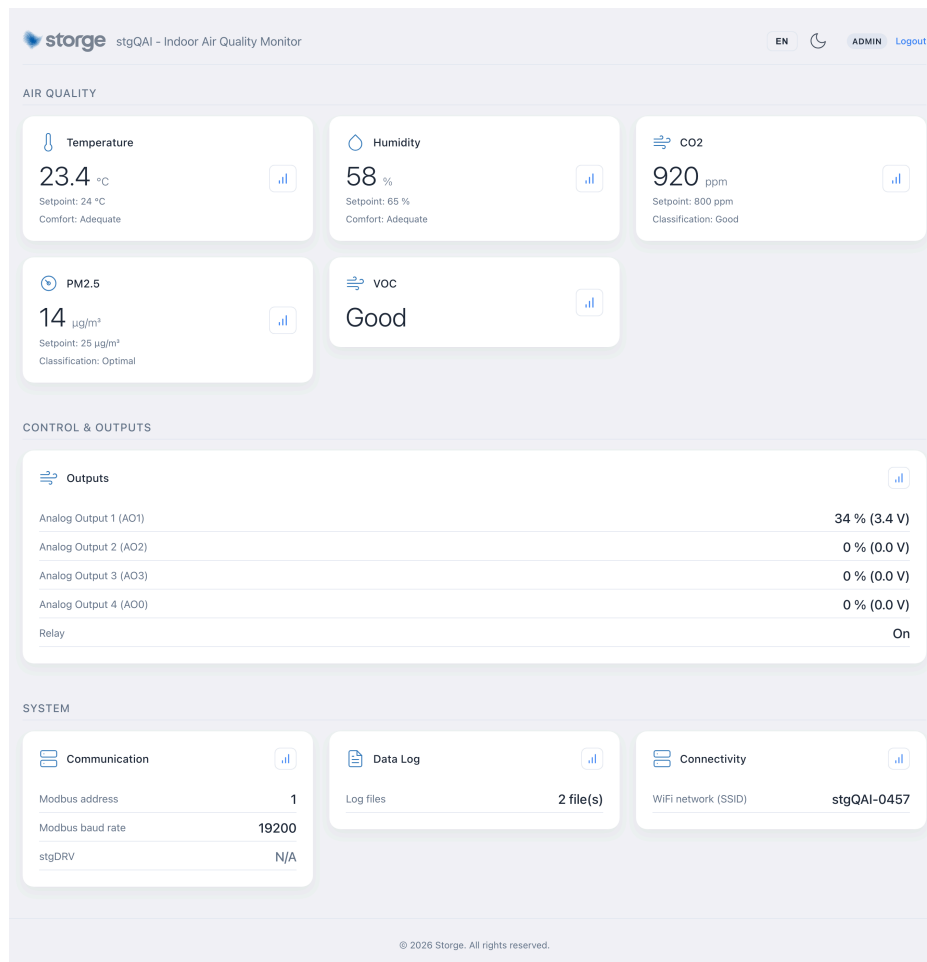
1. Click **Login**, in the top right corner.
2. Enter the user "**admin**" and the password "**storge01**" and click **Sign in**.

System Access

Sign in

Cancel

After login, the dashboard also shows the **System** section, with **Communication**, **Data Log** and **Connectivity**:

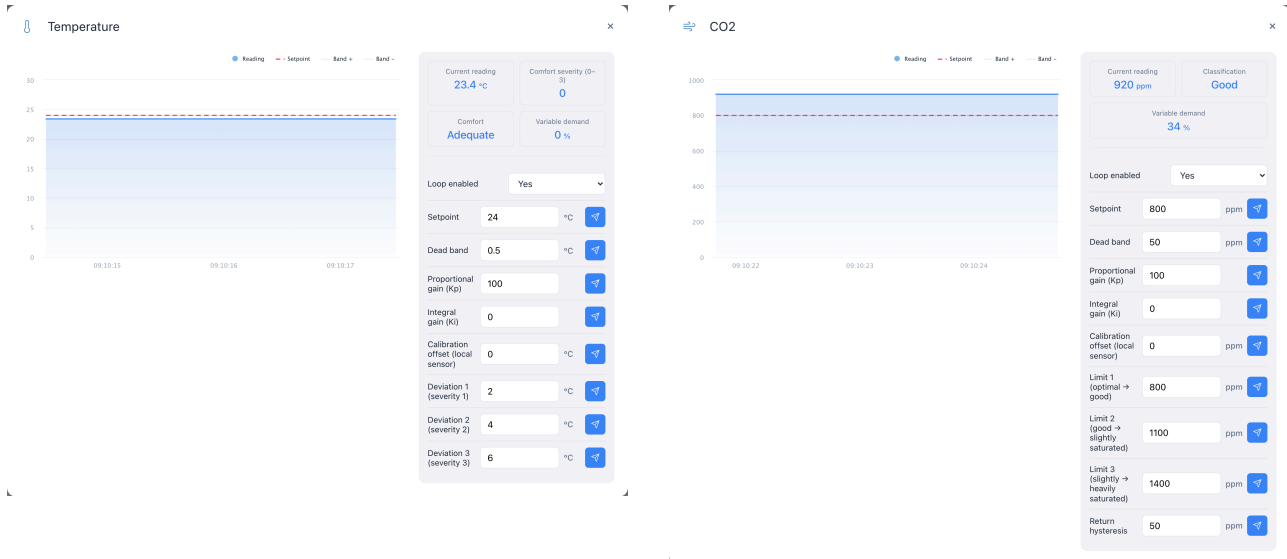


The session ends when the browser tab is closed; to leave earlier, click **Logout**.

Adjusting settings

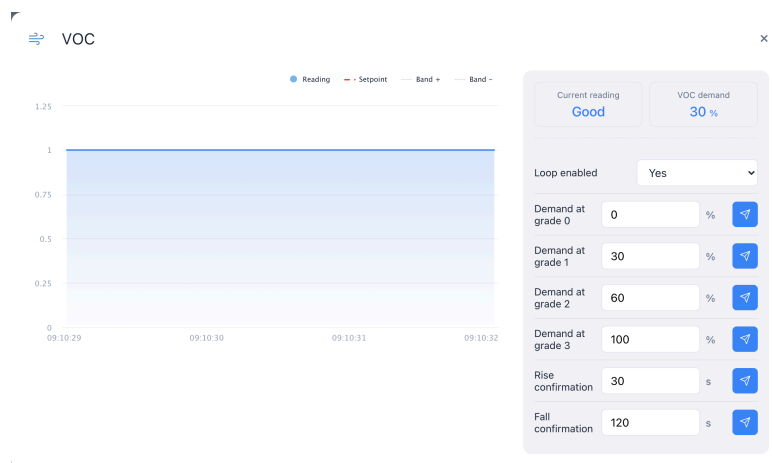
In each field, change the value and click the blue button next to it to send it to the unit.

Continuous variables (temperature, humidity, CO₂, CO and PM2.5)



- **Loop enabled:** turns control of the variable on or off (the reading keeps showing).
- **Setpoint and dead band.**
- **Kp and Ki gains** of the PI control, adjustable to suit the installation. If ventilation reacts too slowly, increase the gains; if it oscillates, reduce them.
- **Calibration offset:** fine adjustment of the sensor reading.
- **Temperature and humidity:** comfort deviations 1, 2 and 3 relative to the setpoint.
- **CO₂, CO and PM2.5:** classification limits 1, 2 and 3 and return hysteresis.

VOC



- **Demand per level:** ventilation applied at each VOC level (0 to 3).
- **Rise and fall confirmation:** time the level must hold before the demand changes, avoiding oscillation.

Outputs

The screenshot shows a configuration window titled 'Outputs' with a close button (x) in the top right. It contains four identical blocks for 'Analog Output 1 (AO1)', 'Analog Output 2 (AO2)', 'Analog Output 3 (AO3)', and 'Analog Output 4 (AO4)'. Each block has the following settings:

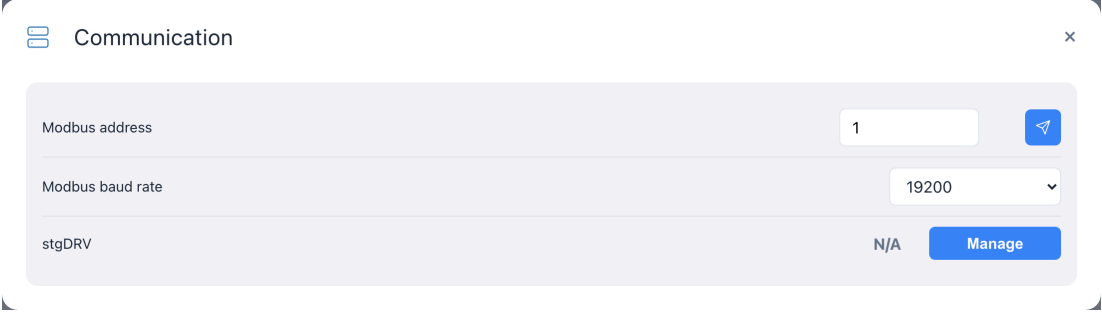
- Assign Temperature:** Yes (AO1), No (AO2, AO3, AO4)
- Assign Humidity:** Yes (AO1), No (AO2, AO3, AO4)
- Assign CO₂:** Yes (AO1), No (AO2, AO3, AO4)
- Assign PM2.5:** Yes (AO1), No (AO2, AO3, AO4)
- Assign VOC:** Yes (AO1), No (AO2, AO3, AO4)
- Minimum:** 0 %
- Maximum:** 100 %
- Limit mode:** Rescale
- Manual: enable:** No
- Manual: value:** 0 %

The window has an identical block for each of the four outputs, identified by the output name and the terminal. From factory, only **Analog Output 1** is assigned to the variables (to all of them); outputs 2 to 4 leave the factory with no assigned variable and stay at 0 % until they are configured.

- **Assign Temperature / Humidity / CO₂ / CO / PM2.5 / VOC:** which variables drive the output. The output follows the **highest** demand among the assigned ones.
- **Minimum and maximum:** floor and ceiling of the output. The minimum works as the fan minimum speed.
- **Limit mode:** *Cut-off*, where the output saturates at the limits, or *Rescale*, where the 0 to 100 % demand is rescaled between the minimum and the maximum.
- **Manual:** forces the output to a fixed value, ignoring the control. Use only for tests and maintenance; do not leave it on in normal operation.

The **relay function** leaves the factory as *ON/OFF on any active analog output*: the relay switches on whenever any output is above 0 %. The switch-on delay and the minimum time between transitions can be adjusted through Modbus (registers 40052 and 40053). Other relay functions depend on factory configuration.

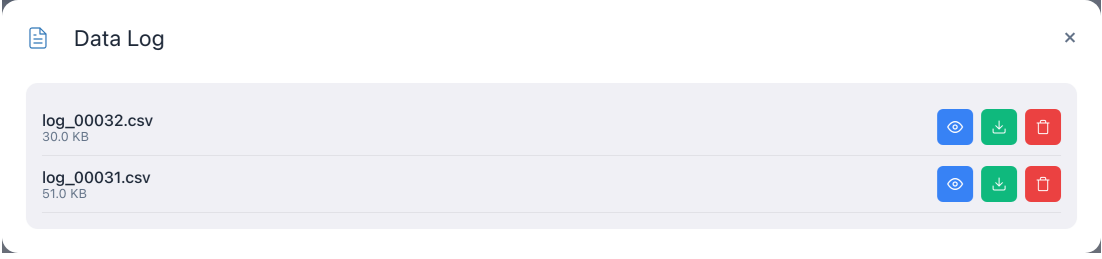
Communication



The screenshot shows the 'Communication' settings interface. It has a title bar with a menu icon and a close button. The settings are organized into three rows: 'Modbus address' with a text input containing '1' and a send icon; 'Modbus baud rate' with a dropdown menu set to '19200'; and 'stgDRV' with the value 'N/A' and a blue 'Manage' button.

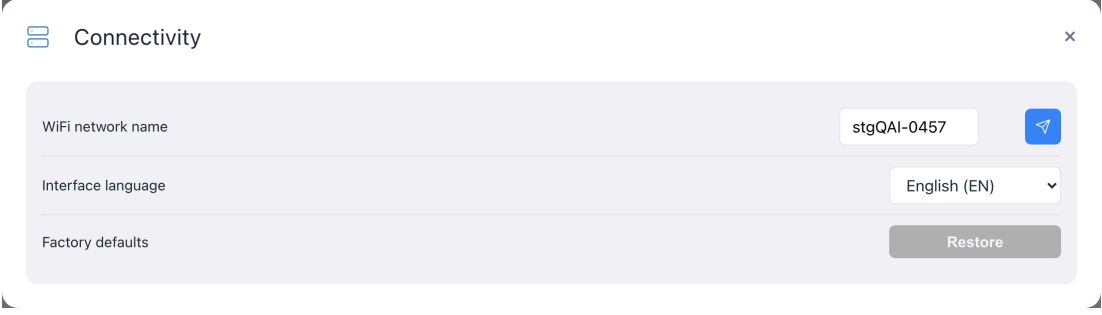
- **Modbus address** and **baud rate** (factory: 1 and 19200 bps).
- **stgDRV**: shows whether a bonded stgDRV is responding. The **Manage** button opens the bonding screen, which lists the units within range and lets you bond or unbond slaves and stgDRV.

Data Log and Connectivity



The screenshot shows the 'Data Log' interface. It has a title bar with a menu icon and a close button. Below the title bar, there are two log entries. Each entry consists of a file name and size (e.g., 'log_00032.csv' and '30.0 KB') followed by three icons: a blue eye for viewing, a green download arrow for downloading, and a red trash can for deleting.

- **Data Log**: the controller records the readings periodically; each file can be viewed, downloaded as CSV or deleted.



The screenshot shows the 'Connectivity' settings interface. It has a title bar with a menu icon and a close button. The settings are organized into three rows: 'WiFi network name' with a text input containing 'stgQAI-0457' and a send icon; 'Interface language' with a dropdown menu set to 'English (EN)'; and 'Factory defaults' with a grey 'Restore' button.

- **WiFi network name**: the unit restarts when saved, and the password stays the same.
- **Interface language**: Portuguese, English or Spanish.
- **Factory defaults (Restore)**: returns the parameters to the factory values (table below).

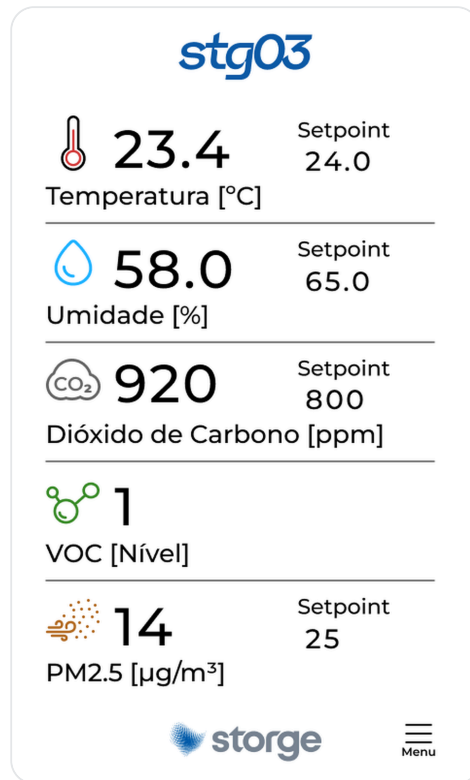
Factory values

PARAMETER	FACTORY VALUE
Temperature setpoint	24 °C
Humidity setpoint	65 % RH
CO ₂ setpoint	800 ppm
CO setpoint	15 ppm
PM2.5 setpoint	25 µg/m ³
Kp / Ki gains (all variables)	100 / 0
Dead band: temperature · humidity	0.5 °C · 3 % RH
Dead band: CO ₂ · CO · PM2.5	50 ppm · 2 ppm · 3 µg/m ³
Comfort deviations: temperature	2 · 4 · 6 °C
Comfort deviations: humidity	5 · 15 · 25 % RH
Demand per VOC level (0 · 1 · 2 · 3)	0 · 30 · 60 · 100 %
VOC confirmation (rise · fall)	30 s · 120 s
Output 1: assigned variables	All
Outputs 2 to 4: assigned variables	None
Outputs 1 to 4: minimum · maximum	0 % · 100 %
Outputs 1 to 4: limit mode	Rescale
Outputs 1 to 4: manual mode	Off
Relay function	On with the outputs
Relay: delay · minimum time between transitions	10 s · 60 s
Modbus address · baud rate	1 · 19200 bps
HMI password	0000
HMI numeric entry	Increment/decrement (+/-)
Language	Portuguese

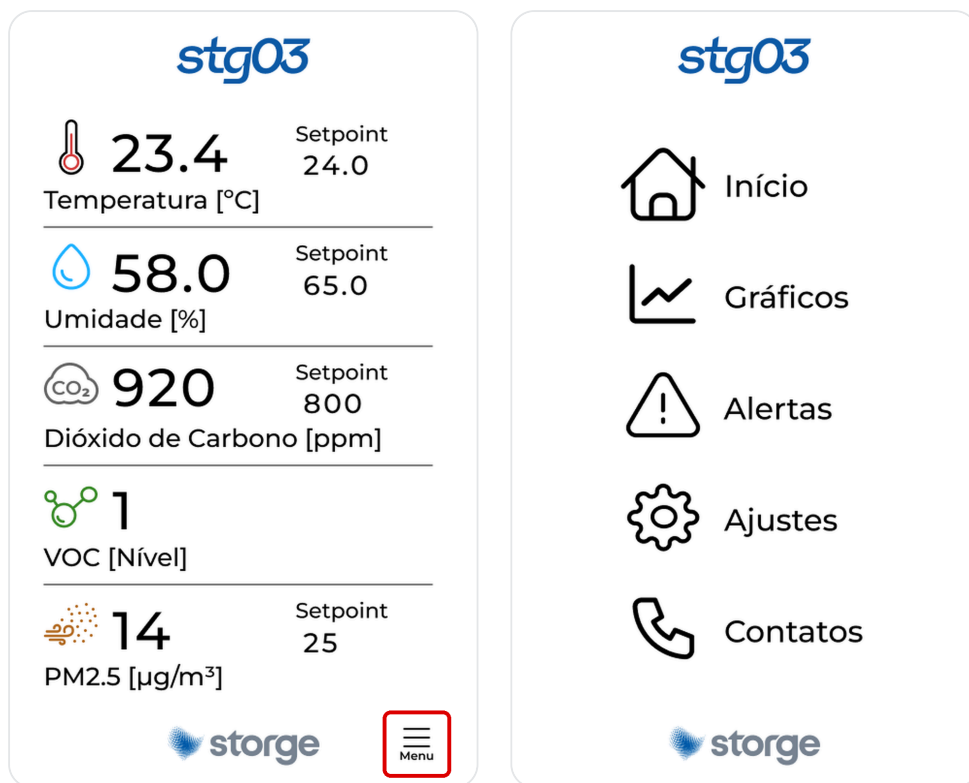
HMI

The HMI (touch display) provides, on the unit itself, the readings, the graphs and the main settings. **The HMI screens are in Portuguese**; the names in parentheses below give the English meaning. The home screen follows the installed sensor combination; the examples below use the MULTI combination. Anything changed on the HMI appears on the web interface immediately, and vice versa.

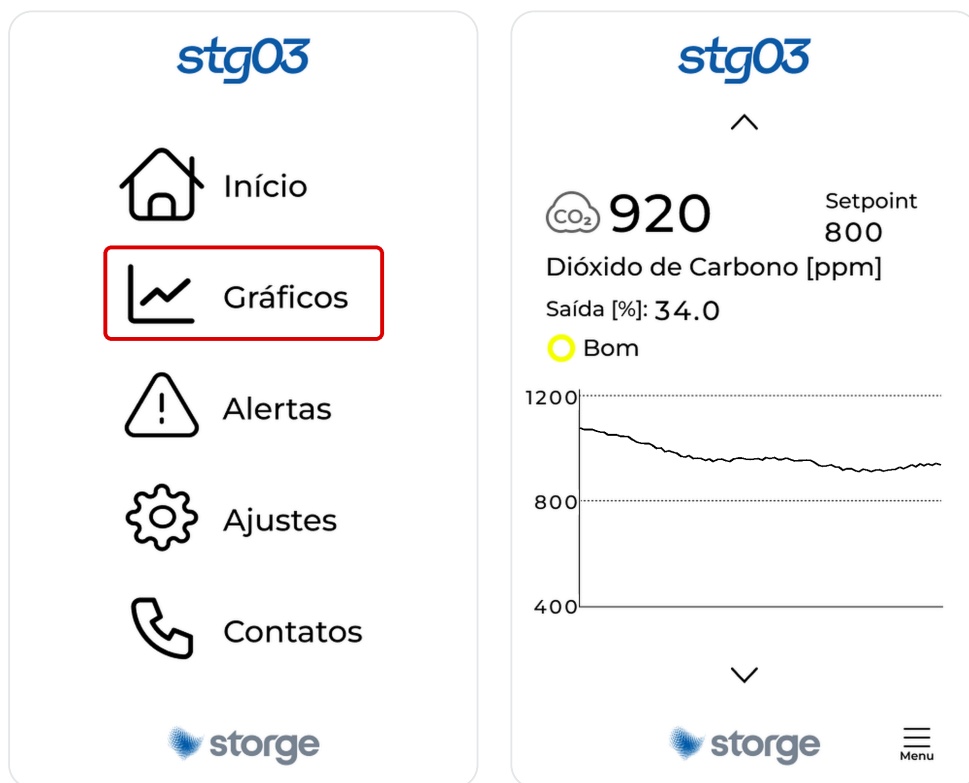
1. **Monitoring:** the home screen shows, for each variable, the current reading and the setpoint.



2. **Menu:** tap **Menu**, in the bottom right corner, to reach the other screens: Início (Home), Gráficos (Graphs), Alertas (Alerts), Ajustes (Settings) and Contatos (Contacts). The **Alertas** screen has no function on this unit.



3. **Graphs:** in the menu, tap **Gráficos**. Each graph shows the reading, the setpoint, the ventilation demand of the variable (shown as **Saída**, Output) and the curve of the last minutes; use the **arrows** to move between variables.



4. **Settings:** in the menu, tap **Ajustes**. The screen shows the HMI version, the STG version and the MAC address. To change parameters, tap **Entrar** (Enter) under *Configurações avançadas* (Advanced settings).



5. **Password:** enter the HMI password and confirm with **Ok**. The factory password is **0000**.



6. **Settings per variable:** there is one page for each variable of the installed combination, with the setpoint, the **Kp** and **Ki** gains and the control enable (*Habilitar Controle*). Use the arrows to navigate and the **Voltar** (Back) button to leave.

stg03

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Temperatura

✎ Setpoint

24.0

✎ Kp

100.0

✎ Ki

0.0

Habilitar Controle ☒

▼



stg03

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CO₂

✎ Setpoint

800

✎ Kp

100.0

✎ Ki

0.0

Habilitar Controle ☒

▼



7. **VOC and general settings:** the VOC page holds the ventilation demand per level (0 to 3); the general page holds the Modbus address and baud rate, the keypad type (numeric or +/-) and the home screen behavior.

stg03

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VOC

✎ Saída no nível 0

0.0

✎ Saída no nível 1

30.0

✎ Saída no nível 2

60.0

✎ Saída no nível 3

100.0

Habilitar Controle ☒

▼



stg03

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Modbus ID

✎ 1

Modbus Baud rate

✎ 19200

Tipo do teclado

✎ Teclado +/-

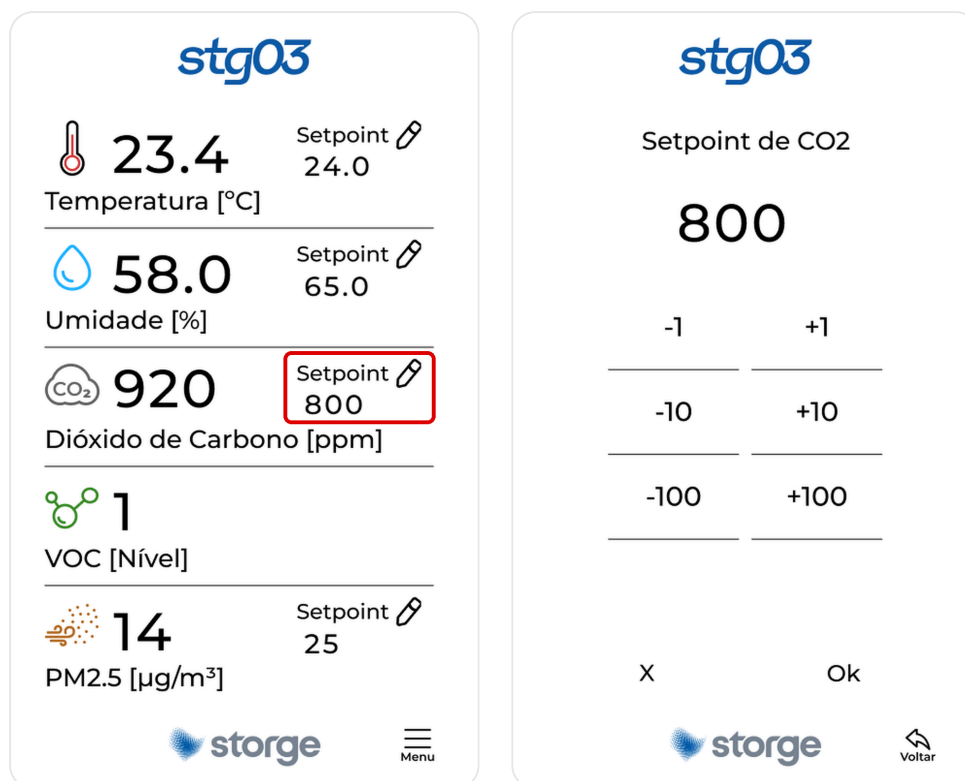
Tela inicial

✎ Bloquear

▼



8. **Editing a value:** on the settings pages, tap the value you want to change to open the edit keypad. With **Tela inicial** (Home screen) set to **Desbloquear** (Unlock) on the general page, a pencil appears next to each setpoint and the value can be changed directly on the home screen; in this mode, the HMI does not ask for the password. On the keypad, adjust the value and tap **Ok** to confirm or **X** to cancel. The value always stays within the allowed limits, which the numeric keypad shows on screen.



9. **Contacts:** in the menu, tap **Contatos** to see the QR code with Storge contact channels.



Communication

MODBUS

The stgQAI works as a Modbus RTU slave. Factory settings:

- **Slave address (Slave ID):** 1
- **Baud rate:** 19200 bps
- **Data bits:** 8 · **Parity:** none · **Stop bits:** 1

The table is the same for every sensor combination: each register has a fixed meaning. Registers of variables that are not part of the installed combination have no meaning and should be ignored. Outputs 1 to 4 in the table are Analog Outputs 1 to 4 of the interface (terminals AO1, AO2, AO3 and AO0).

Scale factor

To get the real value, divide the value read by the factor in the **Scale** column; to write, multiply the desired value by the factor. **Example:** the temperature setpoint has scale 10: a reading of **240** means **24.0 °C**.

MODBUS TABLE

Holding registers (read/write)

ADDRESS	CONTENT	SCALE
40001	Temperature control: 0 = off, 1 = on	1
40002	Humidity control: 0 = off, 1 = on	1
40003	CO ₂ control: 0 = off, 1 = on	1
40004	CO control: 0 = off, 1 = on	1
40005	PM2.5 control: 0 = off, 1 = on	1
40006	VOC control: 0 = off, 1 = on	1
40007	Installed sensor combination (factory setting)	1
40008	Temperature setpoint (°C)	10
40009	Temperature PI loop enabled (0/1)	1
40010	Temperature: Kp	10
40011	Temperature: Ki	1000
40012	Temperature dead band (°C)	10
40013	Humidity setpoint (% RH)	10
40014	Humidity PI loop enabled (0/1)	1

ADDRESS	CONTENT	SCALE
40015	Humidity: Kp	10
40016	Humidity: Ki	1000
40017	Humidity dead band (% RH)	10
40018	CO ₂ setpoint (ppm)	1
40019	CO ₂ PI loop enabled (0/1)	1
40020	CO ₂ : Kp	10
40021	CO ₂ : Ki	1000
40022	CO ₂ dead band (ppm)	1
40023	CO ₂ : limit 1, optimal → good (ppm)	1
40024	CO ₂ : limit 2, good → slightly saturated (ppm)	1
40025	CO ₂ : limit 3, slightly → very saturated (ppm)	1
40026	CO ₂ : return hysteresis (ppm)	1
40027	CO setpoint (ppm)	10
40028	CO PI loop enabled (0/1)	1
40029	CO: Kp	10
40030	CO: Ki	1000
40031	CO dead band (ppm)	10
40032	CO: limit 1, optimal → good (ppm)	10
40033	CO: limit 2, good → slightly saturated (ppm)	10
40034	CO: limit 3, slightly → very saturated (ppm)	10
40035	CO: return hysteresis (ppm)	10
40036	PM2.5 setpoint (µg/m³)	1
40037	PM2.5 PI loop enabled (0/1)	1
40038	PM2.5: Kp	10
40039	PM2.5: Ki	1000
40040	PM2.5 dead band (µg/m³)	1
40041	PM2.5: limit 1, optimal → good (µg/m³)	1
40042	PM2.5: limit 2, good → slightly saturated (µg/m³)	1
40043	PM2.5: limit 3, slightly → very saturated (µg/m³)	1
40044	PM2.5: return hysteresis (µg/m³)	1

ADDRESS	CONTENT	SCALE
40045	Ventilation demand at VOC level 0 (%)	10
40046	Ventilation demand at VOC level 1 (%)	10
40047	Ventilation demand at VOC level 2 (%)	10
40048	Ventilation demand at VOC level 3 (%)	10
40049	VOC: rise confirmation time (s)	1
40050	VOC: fall confirmation time (s)	1
40051	Relay function (0 = ON/OFF on active output, factory)	1
40052	Relay switch-on delay (s)	1
40053	Minimum time between relay transitions (s)	1
40054	Output 1: assigned to temperature (0/1)	1
40055	Output 1: assigned to humidity (0/1)	1
40056	Output 1: assigned to CO ₂ (0/1)	1
40057	Output 1: assigned to CO (0/1)	1
40058	Output 1: assigned to PM2.5 (0/1)	1
40059	Output 1: assigned to VOC (0/1)	1
40060	Output 1: minimum (%)	10
40061	Output 1: maximum (%)	10
40062	Output 1: manual mode (0/1)	1
40063	Output 1: manual value (%)	10
40064	Output 2: assigned to temperature (0/1)	1
40065	Output 2: assigned to humidity (0/1)	1
40066	Output 2: assigned to CO ₂ (0/1)	1
40067	Output 2: assigned to CO (0/1)	1
40068	Output 2: assigned to PM2.5 (0/1)	1
40069	Output 2: assigned to VOC (0/1)	1
40070	Output 2: minimum (%)	10
40071	Output 2: maximum (%)	10
40072	Output 2: manual mode (0/1)	1
40073	Output 2: manual value (%)	10
40074	Output 3: assigned to temperature (0/1)	1

ADDRESS	CONTENT	SCALE
40075	Output 3: assigned to humidity (0/1)	1
40076	Output 3: assigned to CO ₂ (0/1)	1
40077	Output 3: assigned to CO (0/1)	1
40078	Output 3: assigned to PM2.5 (0/1)	1
40079	Output 3: assigned to VOC (0/1)	1
40080	Output 3: minimum (%)	10
40081	Output 3: maximum (%)	10
40082	Output 3: manual mode (0/1)	1
40083	Output 3: manual value (%)	10
40084	Output 4: assigned to temperature (0/1)	1
40085	Output 4: assigned to humidity (0/1)	1
40086	Output 4: assigned to CO ₂ (0/1)	1
40087	Output 4: assigned to CO (0/1)	1
40088	Output 4: assigned to PM2.5 (0/1)	1
40089	Output 4: assigned to VOC (0/1)	1
40090	Output 4: minimum (%)	10
40091	Output 4: maximum (%)	10
40092	Output 4: manual mode (0/1)	1
40093	Output 4: manual value (%)	10
40094	Modbus address (1–247)	1
40095	Modbus baud rate	1
40096	Gas sensor mode (factory setting)	1

Input registers (read only)

ADDRESS	CONTENT	SCALE
30001	Reserved (factory use)	1
30002	Reserved (factory use)	1
30003	Reserved (factory use)	1
30004	Unit commissioned (0/1)	1
30005	Temperature: reading (°C)	10
30006	Temperature: filtered reading (°C)	10
30007	Ventilation demand from temperature (%)	10
30008	Temperature: diagnostic code	1
30009	Temperature: reading age (s)	1000
30010	Temperature: reading valid (0/1)	1
30011	Temperature sensor failure (0/1)	1
30012	Temperature: comfort deviation (0–3)	1
30013	Temperature, comfort: 0 = low, 1 = adequate, 2 = high	1
30014	Humidity: reading (% RH)	10
30015	Humidity: filtered reading (% RH)	10
30016	Ventilation demand from humidity (%)	10
30017	Humidity: diagnostic code	1
30018	Humidity: reading age (s)	1000
30019	Humidity: reading valid (0/1)	1
30020	Humidity sensor failure (0/1)	1
30021	Humidity: comfort deviation (0–3)	1
30022	Humidity, comfort: 0 = low, 1 = adequate, 2 = high	1
30023	CO ₂ : reading (ppm)	1
30024	CO ₂ : filtered reading (ppm)	1
30025	Ventilation demand from CO ₂ (%)	10
30026	CO ₂ : diagnostic code	1
30027	CO ₂ : reading age (s)	1000
30028	CO ₂ : reading valid (0/1)	1

ADDRESS	CONTENT	SCALE
30029	CO ₂ sensor failure (0/1)	1
30030	CO ₂ level: 0 = optimal ... 3 = very saturated	1
30031	CO: reading (ppm)	10
30032	CO: filtered reading (ppm)	10
30033	Ventilation demand from CO (%)	10
30034	CO: diagnostic code	1
30035	CO: reading age (s)	1000
30036	CO: reading valid (0/1)	1
30037	CO sensor failure (0/1)	1
30038	CO level: 0 = optimal ... 3 = very saturated	1
30039	PM2.5: reading (µg/m³)	1
30040	PM2.5: filtered reading (µg/m³)	1
30041	Ventilation demand from PM2.5 (%)	10
30042	PM2.5: diagnostic code	1
30043	PM2.5: reading age (s)	1000
30044	PM2.5: reading valid (0/1)	1
30045	PM2.5 sensor failure (0/1)	1
30046	PM2.5 level: 0 = optimal ... 3 = very saturated	1
30047	VOC level (0–3)	1
30048	VOC: diagnostic code	1
30049	VOC: reading age (s)	1000
30050	VOC: reading valid (0/1)	1
30051	Ventilation demand from VOC (%)	10
30052	Relay state (0/1)	1
30053	Output 1: final applied value (%)	10
30054	Output 2: final applied value (%)	10
30055	Output 3: final applied value (%)	10
30056	Output 4: final applied value (%)	10
30057	Overall air quality level (0–3)	1
30058	CO ₂ sets the overall level (0/1)	1

ADDRESS	CONTENT	SCALE
30059	CO sets the overall level (0/1)	1
30060	PM2.5 sets the overall level (0/1)	1
30061	VOC sets the overall level (0/1)	1
30062	Communication failure with the stgDRV (0/1)	1
30063	Temperature sensor failure (0/1)	1
30064	Humidity sensor failure (0/1)	1
30065	CO ₂ sensor failure (0/1)	1
30066	CO sensor failure (0/1)	1
30067	PM2.5 sensor failure (0/1)	1
30068	Reserved (factory use)	1

In state and failure registers, **0** = inactive and **1** = active.

Troubleshooting

SYMPTOM	WHAT TO CHECK
The Wi-Fi network does not appear	Wait about 30 s after power-up; check the 24 Vdc power supply (plugged in and connected to terminals +24V and GND) and its polarity
The page does not open	Check that you are connected to the controller network and open 192.168.4.1; turn off mobile data
A variable card does not appear	The variable is not part of the installed sensor combination. This is normal
Reading stuck at a fixed value	Faulty or poorly seated sensor. Contact technical support
The output does not follow the reading or is stuck at a value	Loop disabled, output in Manual mode, or output minimum and maximum
Outputs 2, 3 or 4 always stay at 0 %	From factory, these outputs have no assigned variable. Assign the variables in the Outputs window
Measured voltage differs from the interface	Check the terminal in parentheses: Analog Output 4 is terminal AOO
The relay switches but the load does not turn on	The contact is dry: the load needs its own supply. Check whether NO (NA) or NC (NF) was used
Communication shows the stgDRV off	The bonded stgDRV is off, out of range or unbonded
I cannot edit any field	Not logged in or session expired. Log in again as administrator

QUICK REFERENCE

ITEM	FACTORY VALUE
Wi-Fi network	stgQAI-<serial number>
Wi-Fi password	123456789
Web interface address	192.168.4.1
Administrator login	admin / storge01
HMI password	0000
Modbus	address 1, 19200 bps, 8N1