Quick Setup Guide

MKGW3 BLE Gateway & BLE Sensors

This guide gets your gateway online and your sensors reporting in about **15 minutes**.

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1. Before you start

Have these ready:

You need	Why
A smartphone (Android or iOS) with Bluetooth on	The gateway and sensors are configured over Bluetooth
The **MKScannerPro** app	Configures the **gateway**
The **BeaconX Pro** app	Configures the **sensors**
An Ethernet cable and/or your Wi-Fi name and password	The gateway's internet connection
Your **MQTT server details** (table below)	Where the gateway sends its data. Your system administrator or our support team provides these.

Your MQTT server details. Fill this in before you start:

Setting	Your value	Example
Host (server address)	_____	`10.0.0.130`
Port	_____	`1883`
Username	_____	`gateway`
Password	_____	*(provided separately)*
Tenant / account prefix	_____	`dev`

> **Tip:** The phone does not need to be on the same network as the gateway. But during setup the app will try to reach your MQTT server (see Step 3.7), so the phone **must be able to reach that server**. For a local server, that means connecting the phone to the same Wi-Fi.

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2. Get to know the gateway

The gateway has three status lights:

Light	Meaning when ON
Power	The gateway has power
Network	The gateway is connected to your network or internet (Ethernet or Wi-Fi)
Cloud	The gateway is connected to your MQTT server. **This is the one that matters.**

Setup mode: A new gateway starts in setup mode automatically and advertises itself over Bluetooth, ready to be found by the app.

Factory reset: To start over, **press and hold the reset button until the lights blink blue**. The gateway returns to factory settings and setup mode.

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3. Set up the gateway (MKScannerPro app)

3.1 Connect to the gateway

1. Power on the gateway. If you're using Ethernet, plug in the cable now.
2. Open **MKScannerPro** and choose **POE Gateway**.
3. Find your gateway in the list and tap it.
4. Select the device type **MKGW3**.
5. If asked for a password, enter the default: `Moko4321`.

3.2 MQTT server settings

Enter the values from your table in Section 1:

Field	What to enter	Example
Host	Your MQTT server address	`10.0.0.130`
Port	Your MQTT server port	`1883`
Client ID	A name unique to this gateway. Every gateway must have a different one.	`MK_12211966`

3.3 Topics (where data goes)

A topic is like a mailbox address on the MQTT server. The gateway needs **two different** ones:

Field	Format	Example
Publish (gateway sends data here)	`<tenant>/plant/mkgw3/<client-id>/data`	`dev/plant/mkgw3/MK_12211966/data`
Subscribe (gateway listens for commands here)	`<tenant>/plant/mkgw3/<client-id>/cmd`	`dev/plant/mkgw3/MK_12211966/cmd`

> ⚠️ **Type the topics exactly. They are case-sensitive and every character counts.**
>
> - The word is `mkgw3` (m-k-g-w-3), not `mgw3`.
> - **Publish and Subscribe must be different.** If they are the same, the gateway will not work.
> - A wrong topic often shows **no error at all**: the gateway looks connected, but your data never arrives.

3.4 Status message (recommended)

If your app version offers **Last Will / LWT**, set it so your system is told automatically when the gateway goes offline:

Field	Value
LWT Topic	`<tenant>/plant/mkgw3/<client-id>/status` (e.g. `dev/plant/mkgw3/MK_12211966/status`)
LWT Message	`{"status":"offline"}`
Retain	On

3.5 User credentials

Open the **User Credentials** tab and enter the **Username** and **Password** for your MQTT server. Without them, the server will refuse the gateway.

3.6 Network connection

1. Enter your **Wi-Fi name** and **Wi-Fi password** (even if you plan to use Ethernet, so the gateway has a backup).
2. Choose the connection order:

Option	Behavior
Ethernet → Wi-Fi	Use the cable. Switch to Wi-Fi if the cable connection fails. *(Recommended when a cable is available)*
Wi-Fi → Ethernet	Use Wi-Fi. Switch to the cable if Wi-Fi fails.
Ethernet only / Wi-Fi only	No backup

3.7 Connect

Tap **Connect**.

What happens next: before the app sends anything to the gateway, it first **tests your settings itself** by connecting to your MQTT server. Only settings that work get sent to the gateway.

- **Test passes:** the settings are sent to the gateway automatically.

- **Test fails:** the app asks whether you still want to send the settings. **Normally choose No** and recheck the host, port, username and password. Choose Yes only if you know the phone can't reach the server but the gateway will be able to (for example, the phone is on mobile data).

3.8 Confirm it worked

Within a minute, the gateway's **Cloud** light should turn on. 🎉 Your gateway is online.

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4. Set up the sensors (BeaconX Pro app)

Do this for each temperature/humidity sensor, accelerometer, or other MOKO sensor.

1. Open **BeaconX Pro** and tap **MK Sensor**.
2. Select your sensor type, e.g. **Temperature & Humidity Sensor**.
3. Tap your sensor in the list to connect.
4. Enter the password. The default is `Moko4321`.
5. **Give the sensor a name** that says where it is, e.g. `Greenhouse-North`. This name appears on your dashboards, so a clear name saves time later.
6. *(Optional)* **Adjust the advertising slots.** Each slot is a separate "channel" the sensor broadcasts on, and each one can send different information (temperature and humidity, battery, device ID, and so on). The default settings work out of the box. Change them only if you know you need something specific.
7. Tap **Save**. The sensor starts broadcasting with the new settings right away.

The gateway picks up every sensor within Bluetooth range automatically. **The gateway needs no extra setup per sensor.**

> 🔒 **Security tip:** Change each device's default password (`Moko4321`) after setup, and store the new passwords somewhere safe. Anyone nearby with the app and the default password could otherwise change your device settings.
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> 📶 **Range tip:** Keep sensors within roughly 10–30 m of the gateway with few walls in between. Metal shelves, water tanks, and concrete reduce range.

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5. Troubleshooting

What you see	Likely cause	What to do
Gateway doesn't appear in the app	It's not in setup mode, or Bluetooth is off	Turn on Bluetooth (and Location on Android). Factory-reset the gateway (Section 2).
Network light off	No cable connection, or wrong Wi-Fi password	Check the cable and the Wi-Fi name and password. Re-run Step 3.6.
Network on, **Cloud** off	Gateway can't reach or log in to the MQTT server	Check Host, Port, Username and Password. Check that the server is running and that its firewall allows port 1883.
Cloud on, but no data on the dashboard	Topic typo, or no sensors in range	Recheck the Publish topic character by character (`mkgw3`, case-sensitive). Move a sensor closer to the gateway.
One sensor missing, others fine	Sensor out of range or battery flat	Move it closer, or replace the battery.
Something went wrong and you want to start fresh		Factory-reset the gateway (Section 2) and repeat Section 3.

Still stuck? Contact support through the contact form at **https://www.ratotecki.com/#contact**. Include your gateway's **Client ID** and a photo of the status lights.