Shelly H&T Gen3

Device identification

- Device name: **Shelly H&T Gen3**
- Device model: **S3SN-0U12A**
- Device SSID: **ShellyHTG3-XXXXXXXXXXXX**
- Device Bluetooth ID: **0x1809**

Short description

Shelly H&T Gen3 (the Device) is a Wi-Fi smart humidity and temperature sensor, featuring a large e-paper graphic display.

Main features

- **Wi-Fi Connectivity:** The device can connect to your home Wi-Fi network, allowing you to remotely monitor humidity and temperature data through a smartphone app or other compatible devices.
- **Large E-Paper Graphic Display:** It features a large e-paper graphic display that provides clear and easy-to-read humidity and temperature information.
- **Digital clock:** NTP-synchronized real-time clock.
- **Integration with Smart Home Platforms:** You can integrate the Shelly H&T Gen3 with popular smart home platforms, including Google, Alexa, and Samsung SmartThings. This enables voice control and automation capabilities through these platforms.

- **USB Type-C Port:** It includes a USB Type-C port for powering the device. While it cannot be used to charge the device's batteries, it allows for continuous power through a USB connection.
- **Bluetooth Connectivity:** Bluetooth is available for inclusion purposes, which may be useful during the setup process.
- **User-Friendly Interface:** The device provides a user-friendly interface with a reset button for manual interactions.
- **Battery Operation:** When running on batteries, the device wakes up at set intervals to take measurements of humidity and temperature. It reports changes in data based on predefined thresholds and unconditionally reports its status to the cloud if no reports are made within a specified time.
- **USB-Powered Operation:** When powered via its USB port, the device wakes up more frequently, performs measurements, updates its display, and unconditionally reports data to connected channels.
- **Environmental Specifications:** The device is designed for use in various environments, with an operational temperature range of 0°C to 40°C (32°F to 105°F) and a recommended humidity range of 30% to 70% RH.
- **Power Supply Options:** It can be powered by 4 AA batteries (not included) or a USB Type-C connection.
- **Wireless Connectivity:** The device supports Wi-Fi (802.11 b/g/n) and Bluetooth 4.2 protocols with specified indoor and outdoor range capabilities.
- **MCU (Microcontroller Unit):** The device is equipped with an ESP-Shelly-C38F with 8 MB of flash memory.
- **Firmware Capabilities:** It supports MQTT for communication and various features such as webhooks and scripting.

These features make the Shelly H&T Gen3 a versatile and convenient device for monitoring humidity and temperature in residential, multi-dwelling units, light commercial, university/college, and other settings, with the added benefits of smart home integration and ease of use.

Main applications

- Residential
- MDU (Multi Dwelling Units - apartments, condominiums, hotels, etc.)
- Light commercial (small office buildings, small retail/restaurant/gas station, etc.)
- University/college

Integrations

Amazon Alexa supported capabilities

Yes

Google Smart Home supported traits

Yes

Samsung SmartThings supported capabilities

Yes

Device electrical interfaces

USB Type-C port

- To supply power to the Device.
- Cannot be used to charge batteries inside the Device.

Connectivity

- Wi-Fi
- Bluetooth

User interface
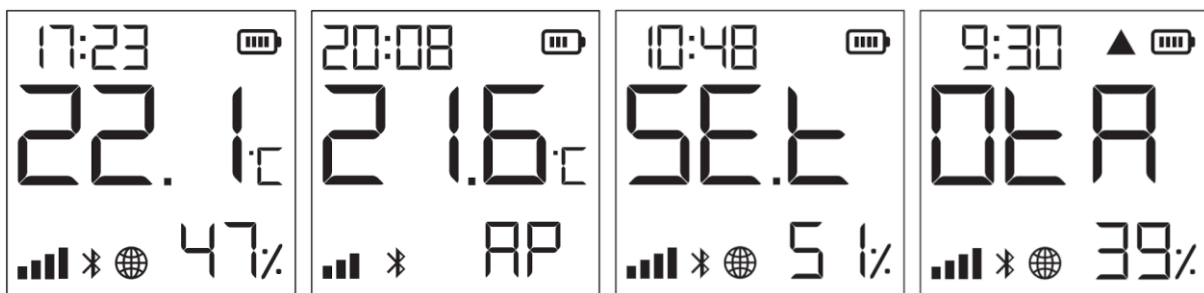
Inputs

- Reset button (behind the back cover)

Reset button

Reset button actions

- Press briefly:
    - If the Device is in Sleep mode, puts it in Setup mode.
    - If the Device is in Setup mode, puts it in Sleep mode.
- Press and hold for 5 sec:
    - If the Device is in Setup mode, enables its access point.
- Press and hold for 10 sec:
    - If the Device is in Setup mode, factory resets the Device.

Outputs

- E-paper graphic display
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Enlarges the table by opening it in a full screen dialogOpen

10:48	Current time
SEt	The Device is in Setup mode.
AP	The Device access point is enabled.
58%	Humidity readings
OtA	The Device is receiving over-the-air update. Shows the progress as a percentage instead of the humidity.
⊕	The Device has reported current readings to the Cloud. If missing, the current readings on the display are not yet reported. In this case, the readings on the display may differ from the ones in the Cloud.
▂▄█	Wi-Fi signal strength indicator
▭	Indicates battery level. Shows an empty battery when only USB powered.
✳	Bluetooth connectivity is enabled.
▲	Error while updating the Device firmware

Measuring and reporting

On batteries

When running on batteries the Device behaves as follows:

1. Wakes up every minute to do a measurement. If there is a 0.2 °C temperature or 3% humidity difference the screen updates. The default threshold for reporting is a change of 0.5 °C or 5%. If the change is less there will be no report sent.
2. If for two hours there is no report based on threshold values, the Device unconditionally (disregarding threshold values) reports its status to Shelly Cloud and other connected channels.
3. Due to self-heating a cool down period of 5 minutes is imposed. During this period the Device would not wake up at all.

On USB power supply

If powered via its USB port the Device will wake up every 5 minutes, perform a measurement, update its screen, unconditionally report to all connected channels, and sleep for 5 minutes.

User initiated report

If the user presses the Reset button (behind the cover) the Device will wake up, perform a measurement, update its screen, unconditionally report to all connected channels, and sleep for 5 minutes.