

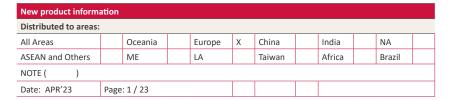
Advance Products News

Launching of new CSNET Home App and ATW-IOT-01 device



Cooling & Heating





Launching of new CSNET Home App and ATW-IOT-01 device

Summary

1. This Advance Product News introduces the new Home Automation solution dedicated to EU Heating range (YUTAKI units): CSNET Home App & ATW-IOT-01 device.

2. The details are indicated in the description.

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1. Description

Purpose of this APN is to announce the release of CSNET Home application for Android and IOS.



CSNET Home

This is a brand-new application with the purpose to remotely manage YUTAKI units, allowing to check the operation status, set up operation parameters, access to the history of installation temperatures with a graphic representation.

The main functions are summarized below:

- Easy user registration
- Easy discovery of the Heating unit from the App
- Control of the zones:
 - ✓ Switch ON/OFF room thermostats and temperature setting change.
 - ✓ Operation Mode change.
- Apply timers to zones.
- Holiday mode.
- Historical data of room temperature, outdoor ambient temperature and setting temperature.
- Flexibility of the App versus the room thermostat configuration: zones with or without room thermostat can be managed from the App, including for installations mixing the 2 types of zones.
- Management of DHW and SWP operations in the same way as space heating zones
- Display of power consumption data, per operation mode, with or without external pulse power meter (the most recent YUTAKI units are able to estimate the power consumption of each operation mode).
- Invite family members or other users to manage the same installation.
- Allow Installers to log-in to installations for remote maintenance.
- Manage more than one Heating installation with the same user account





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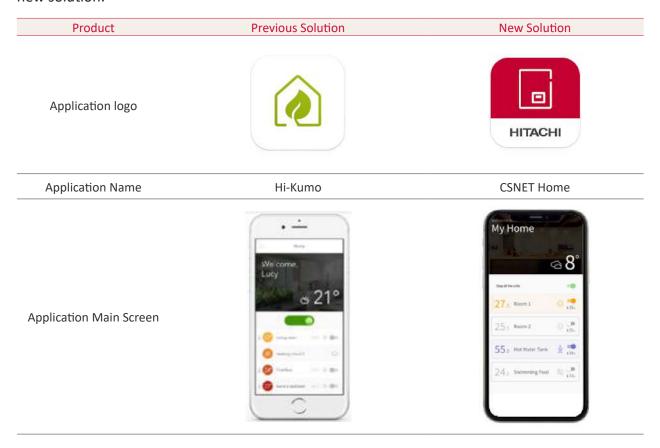
To manage YUTAKI units with CSNET Home Application, the new gateway named ATW-IOT-01 must be connected to each indoor unit.

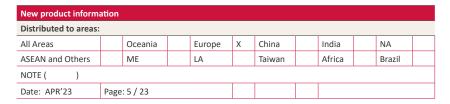


Figure 1: ATW-IOT-01

ATW-IOT-01 is connected to the YUTAKI Unit through the H-Link communication ports. The connection to the server is done through the customer's Wi-Fi network: ATW-IOT-01 is able to get connected to most of the domestic Wi-Fi networks, to communicate directly with the cloud, without any additional hardware required.

The following table shows current Hi-Kumo application and its associated hardware, compared with the new solution:







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One key feature of CSNET Home system is to require only one gateway to connect the Heating unit to the cloud, versus 2 devices for Hi-Kumo.

In addition to the new App visual design matching the Global Hitachi standards, the App was designed focussing on the simplification of all the procedures: account creation, discovery of the unit, with the with the possibility for the installer or the end user to solve any potential trouble by himself, without requesting any external support.

The main benefits of the new CSNET Home solution versus Hi-Kumo solution are the following:

Software Functionalities:

- ✓ Power consumption feature provided from first release.
- ✓ Other visual improvements in order to enhance user experience such as graphical representation of temperatures, indication of operating zones, clear information on dashboard, rename zones...

· Commissioning:

- ✓ CSNET Home solution only requires 1 device to connect the Heating unit to the cloud
- ✓ No need to reset any equipment in case of adding or deleting new zone, new thermostat or adding/ deleting DHW or SWP. CSNET Home application automatically updates its display, to show or hide added or deleted zones or thermostats.
- ✓ Simplification of commissioning procedure with the capability to restart this procedure whenever it is required.
- ✓ Possibility to launch an auto-discovery action from the App without any physical action on the gateway. In case YUTAKI unit is wrongly discovered by CSNET Home App, it is possible to launch the auto-discovery action, to delete all information related to the detected units and to start a new discovery procedure. This action can be done directly by the installer or the end user himself.





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User Management:

- ✓ Multiple user access to the same installation. This feature allows other family members to access to the same installation and manage temperature setting and room thermostats.
- ✓ Device owner can be changed among other family members, linked to the same installation.
- ✓ Allow installer access to the installation for remote maintenance. Installer access to an installation is an operation that must be approved by installation owner (end user).

Remote update:

√ The mobile applications and the ATW-IOT-01 gateway can be updated remotely if required, to get new features or for bug fixes. Application update will be done from Online stores as it is done with other applications. ATW-IOT-01 gateway can be updated remotely without any process of physical software writing on site.





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2. Applicable products, model code and date of sales

ATW-IOT-01 gateway is necessary to control Heating units from CSNET Home App. Details for this new device are summarized in the following table.

New products



Terminated products

The new products presented above will replace the current solution based on Hi-Kumo application.

The status of the related devices is indicated below (termination by end of stock):

Model Description	Model Code	Discontinuation	n Date
ATW-TAG-02 70549926		Already terminated (FY23-Q1)	
AHP-SMB-01	70549919	Available until end of stock	(to be confirmed)





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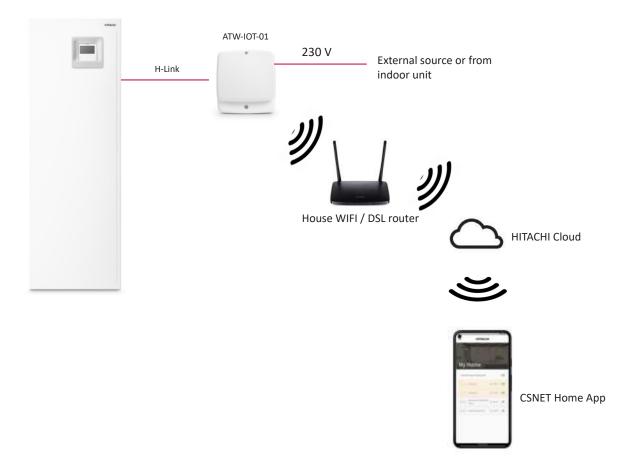
3. Product overview

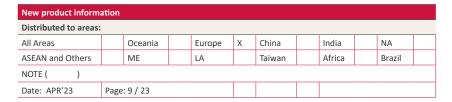
3.1 Connection schematic

ATW-IOT-01 device acts as a bridge between the cloud and YUTAKI Unit. ATW-IOT-01 device must be connected to the H-Link wire of the Heating indoor unit and requires a good quality WIFI signal. ATW-IOT-01 is already capable to connect directly to the house WIFI, without any additional network adapter. In case the WIFI signal is poor at the location of the ATW-IOT-01 device, it is required to install a WIFI signal amplifier to ensure a good operation of the system.

ATW-IOT-01 shall be powered with 230V. The power source can be external or taken from the indoor unit main power line.

The connection schematic is as follows:







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(i) IMPORTANT NOTE:

- Most of domestic routers support 2.4 GHz and 5 GHz WIFI signals. During the initial pairing procedure, ATW-IOT-01 must be connected to a 2.4 GHz signal, as the WIFI chip of ATW-IOT-01 is not compatible with the 5 GHz WIFI signal.
- Some modern routers are now proposing a WIFI 6 signal, which is a combined version of 2.4 GHz and 5 GHz WIFI signals. Such routers may not offer the possibility to manually select the 2.4 GHz signal for the ATW-IOT-01 gateway, as this signal selection procedure is automatically done by the router. In some cases, the router may not correctly perform this automatic assignation and in such case ATW-IOT-01 may not be connected successfully to the WIFI network.
- To avoid this matter, make sure the router can generate a 2.4 GHz WIFI signal and manually enable it. Refer to the router configuration options and the Internet provider online help pages to know how to enable a 2.4 GHz WIFI network.

3.2 Application download

Application is available for both Android and iOS operating systems, from the related store.









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3.3 Heating range compatibility

CSNET Home Application is compatible with the following units:

	75254046	DACAA 2 OVDE
	7E351016	RASM-2.0VRE
	7E351005 / 7E351026	RASM-3V(N)(R)E
	7E351007 / 7E351107	RASM-4(V)NE
YUTAKI M	7E351008 / 7E351108	RASM-5(V)NE
Standard	7E351009 / 7E351109	RASM-6(V)NE
	7E352007 / 7E352107	RASM-4(V)R1E
	7E352008 / 7E352108	RASM-5(V)R1E
	7E352009 / 7E352109	RASM-6(V)R1E
	7E352158	RASM-7R1E
	7E475003 / 7E475103 / 7E475203 / 7E475303	RWM-2.0N(R)E(-W)
	7E475003 / 7E475103 / 7E475204 / 7E475304	RWM-2.5N(R)E(-W)
	7E475003 / 7E475103 / 7E475205 / 7E475305	RWM-3.0N(R)E(-W)
	7E475007 / 7E475107	RWM-4.0NE(-W)
	7E475008 / 7E475108	RWM-5.0NE(-W)
	7E475009 / 7E475109	RWM-6.0NE(-W)
	7E475010 / 7E475110	RWM-8.0NE(-W)
	7E475011 / 7E475111	RWM-10.0NE(-W)
YUTAKI S	7E475202	RWM-1.5R2E
	7E475216 / 7E475252	RWM-2.0R(1)/(2)E
	7E475217 / 7E475253	RWM-2.5R(1)/(2)E
	7E475218 / 7E475254	RWM-3.0R(1)/(2)E
	7E475020	RWM-4.0N1E
	7E475021	RWM-5.0N1E
	7E475022	RWM-6.0N1E
	7E475023	RWM-8.0N1E
	7E475024	RWM-10.0N1E
	7E482007 / 7E482207	RWH-4.0VNF(W)E
	7E482008 / 7E482208	RWH-5.0VNF(W)E
\"\"\"\"\"\"\"\"\"\"\"\"\"\"\"\"\"\"\"	7E482009 / 7E482209	RWH-6.0VNF(W)E
YUTAKI S80	7E482107 / 7E482307	RWH-4.0NF(W)E
	7E482108 / 7E482308	RWH-5.0NF(W)E
	7E482109 / 7E482309	RWH-6.0NF(W)E





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	7E483003 / 7E483103 / 7E483203 / 7E483042 / 7E483142 / 7E483242	RWD-2.0N(R)WE-200S(-W)(-K)
	7E483004 / 7E483104 / 7E483204 / 7E483043 / 7E483143 / 7E483243	RWD-2.5N(R)WE-200S(-W)(-K)
	7E483005 / 7E483105 / 7E483205 / 7E483044 / 7E483144 / 7E483244	RWD-3.0N(R)WE-200S(-W)(-K)
	7E483007 / 7E483107 / 7E483207	RWD-4.0NWE-200S(-W)(-K)
	7E483008 / 7E483108 / 7E483208	RWD-5.0NWE-200S(-W)(-K)
	7E483009 / 7E483109 / 7E483209	RWD-6.0NWE-200S(-W)(-K)
	7E483016 / 7E483116 / 7E483216 / 7E483316 / 7E483416 / 7E483052 / 7E483152 / 7E483342 / 7E483442 / 7E483251	RWD-2.0N(R)W(S)E-260S(-W)(-K)
	7E483017 / 7E483117 / 7E483217 / 7E483317 / 7E483417 / 7E483053 / 7E483153 / 7E483343 / 7E483443 / 7E483252	RWD-2.5N(R)W(S)E-260S(-W)(-K)
YUTAKI S Combi	7E483018 / 7E483118 / 7E483218 / 7E483318 / 7E483418 / 7E483054 / 7E483154 / 7E483344 / 7E483444 / 7E483253	RWD-3.0N(R)W(S)E-260S(-W)(-K)
	7E483020 / 7E483120 / 7E483220 / 7E483320 / 7E483420	RWD-4.0NW(S)E-260S(-W)(-K)
	7E483021 / 7E483121 / 7E483221 / 7E483321 / 7E483421	RWD-5.0NW(S)E-260S(-W)(-K)
	7E483022 / 7E483122 / 7E483222 / 7E483322 / 7E483422	RWD-6.0NW(S)E-260S(-W)(-K)
	7E483502 / 7E483515	RWD-1.5RW(2)E-220S(-K)
	7E483503 / 7E483516 / 7E483565 / 7E483568 / 7E483603	RWD-2.0RW(1)/(2)E-220S(-K)(-6H)
	7E483504 / 7E483517 / 7E483566 / 7E483569 / 7E483604	RWD-2.5RW(1)/(2)E-220S(-K)(-6H)
	7E483505 / 7E483518 / 7E483567 / 7E483570 / 7E483605	RWD-3.0RW(1)/(2)E-220S(-K)(-6H)
	7E483507 / 7E483520	RWD-4.0NW1E-220S(-K)
	7E483508 / 7E483521	RWD-5.0NW1E-220S(-K)
	7E483509 / 7E483522	RWD-6.0NW1E-220S(-K)
Hydrosplit	7E549958 / 7E549966	HWD-WE-220S(-K)
System	7E545900	HWM-WE
Mirror for	7E549936	ATW-YMM-01 (YUTAKI M Mirror)
YUTAKI M	7E549962	ATW-YMM-02 (YUTAKI M Mirror)

- YUTAMPO unit: For YUTAMPO units, the HLINK adapter ATW-HCD-01 is necessary. However, current software version of ATW-HCD-01 board (H-0152) is not fully compatible with ATW-IOT-01. A firmware update of ATW-HCD-01 is then necessary to get this compatibility. A new development is underway for that update, it will be announced with a future specific Technical Bulletin.
- CSNET Home Application will be soon compatible with other following heating applications:
 - » ATW-YCC-01/02/03
 - » More than one YUTAKI per H-Link





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3.4 CSNET Home Pro

CSNET Home will propose some PRO features, in the same way as Hi-Kumo PRO. These PRO features will be available for both mobile and web applications and released by June'23 through an update of CSNET Home Apps.

The table below is summarizing the available PRO features of CSNET Home, in comparison with Hi-Kumo PRO.

Functions	Hi-Kumo Pro	CSNET Home Pro
Management of several user roles + access for 3rd party partners		
Access to all installations for JCH users, with limitations related to the area managed by the JCH users	Ø	•
Access to installations for service partners or installer with the agreement of the end user		•
Access to the installations per research bar, list of favorites		
Information about the installed units (unit model, software versions, detailled configuration settings), in read only mode	⊘	•
Real time monitoring of operation parameters for the active zones + outdoor unit data (including 2nd circuit for S80 units)	•	•
Display of error codes		
Display of troubleshooting details, translated in the available languages	⊘	•
Export of the troubleshooting procedure as a PDF file to be sent by email		•
Historical data related to operation parameters, available in chart view or graphic view, data history of 2 to 3 months	©	•
Basic commands to control zones (On/Off, Temp setting, operation mode etc)		•
Water control settings (OTC configuration) - level 1: only fixed water set point		•
Water control settings (OTC configuration) - level 2: remote setting of all types of water control rules	×	New feature available upon the upcoming software
Remote modification of system settings	×	upgrade (FY24-Q1) (*)
Login to installations and check/edit user configuration (Timers, Holiday mode, power consumption)"	×	Ø
Order log	\bigotimes	
Export data to Excel (order log, historical opeation data)	8	⊘

Available Not available

^(*) These new functionalities for CSNET Home Pro will require YUTAKI PCB and LCD software update as well as ATW-IOT-01 software update. In this last case, the ATW-IOT-01 update is done remotely through the cloud, without the need to reload the software directly to the device.





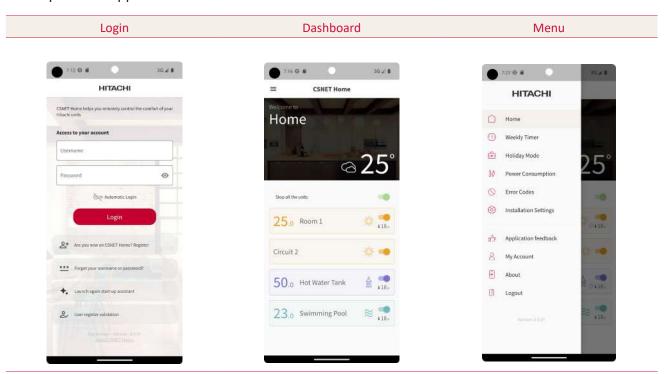
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4. New features

CSNET Home application includes all the previous functionalities from Hi-Kumo plus the following features:

4.1 New Interface

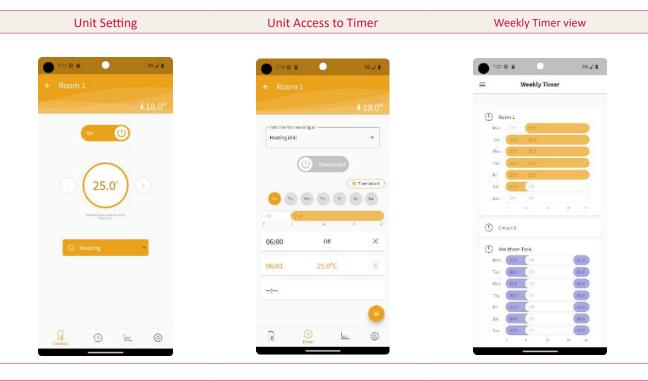
CSNET Home has been designed to keep the same functionalities as Hi-Kumo, proposing a similar layout as the previous App.

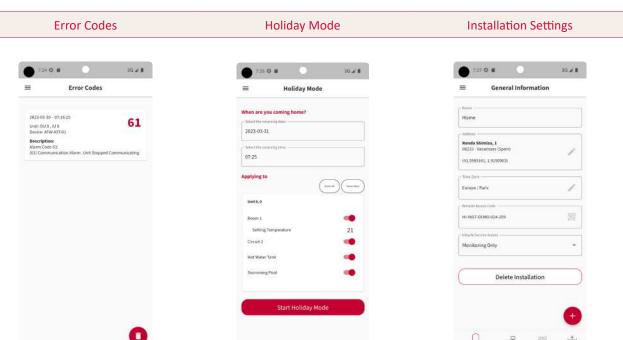






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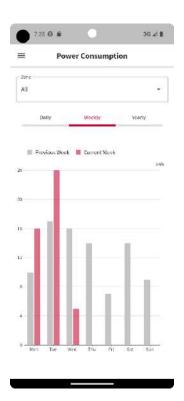
4.2 Power Consumption

CSNET Home shows* the power consumption of your Hitachi Heating system. Data can be read by:

Hours: Yesterday vs Today

• Weeks: the days of this week vs the previous week

• Year: The months of this year vs the previous one



In the example above, data for the whole installation is presented (total power consumption), but it can be checked by single YUTAKI unit and/or by zones (Space Heating, Space Cooling, Hot Sanitary Water and Swimming Pool).

*Note: Application shows Power consumption data in case YUTAKI unit provides power consumption information to the application. YUTAKI unit provides information of power consumption in case:

Power consumption is measured by means external pulse power meter connected to the terminal board.

Software can estimate power consumption in case no external pulse power meter is used. Function not available for all YUTAKI range.





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Check table below to discover Power consumption measure capabilities for each YUTAKI model

The power consumption data displayed is an estimate and may not match at 100% with the real power consumption.

Depending on the Heating unit model, an external energy meter is required to get power data. For the most recent Heating units, an estimate of the power consumption is done directly by the software of the unit, allowing the system and CSNET Home App to get power data without external power meter. Please refer to the table on next page for more details.

Product Range	Unit model	Power consumption estimated by PCB software	Power consumption measured by external pulse power meter	
YUTAKI M	RASM-(4~6)(V)NE RASM-3V(N)(R)E RASM-2.0VRE	-	•	
	RASM-(4~6)(V)R1E RASM-7R1E	•	•	
	RWM-(2.0N~10.0)(R)E(-W)	-	•	
YUTAKI S	RWM-1.5R2E RWM-(2.0~3.0)R(1)/(2)E RWM-(4.0~10.0)N1E	•	•	
YUTAKI S80	RWH-(4.0~6.0)VNF(W)E RWH-(4.0~6.0)NF(W)E	-	•	
	RWD-(2.0~3.0)N(R)WE-200S(-W)(-K) RWD-(4.0~6.0)NWE-200S(-W)(-K) RWD-(2.0~6.0)(R)W(S)E-260S(-W)(-K)	-	•	
YUTAKI SC	RWD-1.5RW(2)E-220S(-K) RWD-(2.0~3.0)RW(1)/(2)E-220S(-K)(-6H) RWD-(4.0~6.0)NW1E-220S(-K)	•	•	
Hydrosplit System	HWD-WE-220S(-K) HWM-WE	•	•	

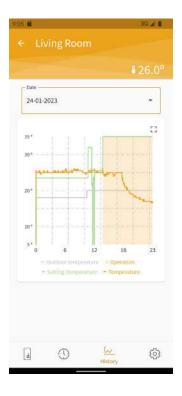




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4.3 Simple historical data

Each controllable zone has its own historical data page, displaying temperature setting, current room temperature, outdoor temperature, and unit operation for the past 7 days.



4.4 Installation Guests

On CSNET Home, different user accounts can access and control the same units / the same installation.

The Owner (administrator) of the Installation can invite any user account.

The guests of the installation will be able to control the units and see all the data, but changing the Installation name, adding a second ATW-IOT-01 and some other installation actions are restricted to the Owner.





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4.5 Multiple installations

Only 1 ATW-IOT-01 can be installed per H-Link line, which means only one ATW-IOT-01 per independent heating unit.

Using CSNET Home App, user can create an installation that can be composed by a maximum of 2 x ATW-IOT-01 devices, which means CSNET Home can support 2 Heating unit per installation from the first release.

A CSNET Home user can create up to 10 installations per account: main installation can be the main home; the second installation can be the holiday home of the family.

After reaching the maximum of 10 installations, a user can accept invitations to be a guest on new installations without limit.

4.6 Automatic Login

The login screen has a button to save login information and allow an automatic login the next time the user opens the application.







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4.7 Auto discovery

The new ATW-IOT-01 can automatically discover any change on the zones of a YUTAKI: as an example, adding a thermostat or a swimming pool zone is automatically detected by the App.

From the application it can be launched an auto discovery procedure to detect new YUTAKI added on the H-LINK, or a change address of the existing YUTAKI.

4.8 Updated Timer Wizard

The weekly timer wizard for heating operation mode has been updated, changing from 3 static questions for a new dynamic flow to get details about the usage patterns and suggest the perfect timer.

The application includes a new interface to setup the Timer for Cooling and Domestic Hot Water.

Space Heating Wizard

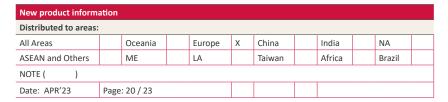
Space Cooling Wizard

Domestic hot Water Wizard











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4.9 Installation owner assignment

On new CSNET Home the owner of an installation can be changed to any other guest added on the installation.

This is very useful in case the Installer is doing the system commissioning, creating the installation by himself, and once the job is finished, handing over the installation to the end user account.

4.10 Web application

CSNET Home Web app is also available at the same time as mobile Apps. This web App is proposing the same control features as the mobile Apps, only the configuration functions are limited. The 2 following functions are indeed not available on the Web App:

Timer Wizards

Add new ATW-IOT-01

The Web App can be accessed from the following URL: https://www.csnetmanager.com/login





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5. General data for ATW-IOT-01

5.1 Product details

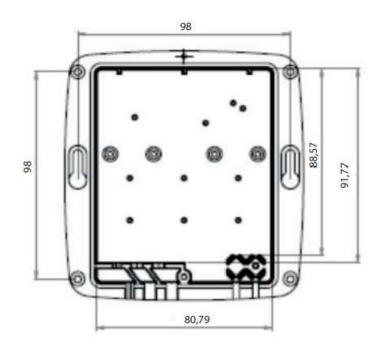
ltem	Specifications
Power supply	230V/50Hz (30mA)
Power consumption	7W (maximum)
Outer dimensions	Width: 123 mm, Depth:115 mm, Height: 37 mm
Weight	214g
Assembling conditions	Indoor
Ambient temperature	0~40 ºC
Humidity	30% ~ 90% Relative Humidity, Non-Condensing
Equipment protection rating	IP21
Maximum altitude for use	< 2000m
Wi-Fi	2.4 GHz Wi-Fi (IEEE 802.11 b/g/n) (2412 ~ 2484 MHz)
Bluetooth	5 (LE) (2402~2480 MHz
H-Link	Communication line: Use 0.75mm2 cable, 2-Conductor, Stranded Copper Communication system: Half-duplex Communication method: Asynchronous Transmission Speed: 9,600 bauds Wiring length: 1,000m maximum (total length of H-LINK I/O bus)
Maximum quantity of ATW-IOT-01 per H-LINK line	1



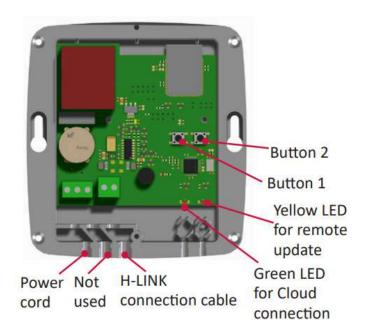


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5.2 Dimensional Data



5.3 Description of parts







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5.3.1 Button Functionality

Button 1	Button 2	Action
15 sec	-	Reset of Wi-Fi settings + password reset
15 sec	15 sec	Factory reset of the device + reset of cloud data

5.3.2 LED Functionality

Green Led status (Cloud connection):

IOT Status	ON Time	OFF Time	Device Status
Standby	500 ms	4 s	ATW-IOT-01 is not linked to any account and it is not connected to the cloud.
Normal operation	Always	-	ATW-IOT-01 is connected to the cloud and running normally
Remote update	150 ms	150 ms	Software of the ATW-IOT-01 is being remotely updated. During the updating time ATW-IOT-01 is not operable.
Connection Alarm	500 ms	500 ms	ATW-IOT-01 has lost communication with the cloud (WI-FI lost, internet connection lost) or communication with Hitachi Heating unit has been stopped for more than 3 minutes (H-Link communication wire cut, communication perturbances)

Yellow Led status (Remote update):

IOT Status	ON Time	OFF Time	Device Status
Normal operation	-	Always	ATW-IOT-01 is connected to the cloud and running normally
Remote 150 ms 150 ms		150 ms	Software of the ATW-IOT-01 is being remotely updated. During the updating time ATW-IOT-01 is not operable.

