Applicant	:	Chengdu Leiqu Information Technology Co., Ltd.
Product	:	4G CPE 3s
Model(s) or Type(s)	:	B313-321
Report No.	:	BTL-ERP-1-S2404C226A

BTL Inc. (Dongguan)
東莞信寶電子產品檢測有限公司

TEST REPORT

COMMISSION REGULATION (EU) 2023/826

Ecodesign requirements for off mode, standby mode, and networked standby energy consumption of electrical and electronic household and office equipment pursuant to Directive 2009/125/EC of the European Parliament and of the Council

Report Reference No. ..... :	BTL-ERP-1-S2404C226A
Tested by (+ signature)..... :	Jimmy Lv
Approved by (+ signature) ..... :	Ben Liu
Date of issue..... :	2024-08-07
Total number of pages.....	21

Testing laboratory

Name ..... :	**BTL Inc (Dongguan).**
Address..... :	No.3, JinShaGang 1st Road, Dalang, DongGuan, Guangdong, China.
Testing location..... :	Room 108, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan, Guangdong, China.

Applicant

Name ..... :	**Chengdu Leiqu Information Technology Co., Ltd.**
Address..... :	No.1102,11th Floor,Building 1,No.69 Tianfu 3rd Street, Chengdu High-tech Zone, China (Sichuan) Pilot Free-Trade Zone

Test specification

Standard ..... :	Commission Regulation (EU) 2023/826
Test procedure..... :	EN 50564: 2011

Test Report Form/blank test report

Test Report Form No. ..... :	ERP_2023/826
Master TRF..... :	Dated 2023

Testing

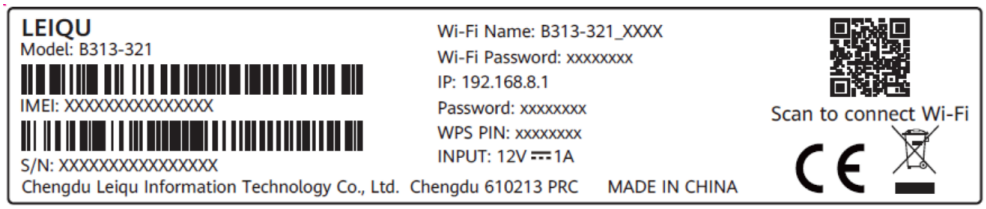
Date of receipt of test item..... :	2024-04-26 (Original) 2024-07-25
Date(s) of performance of test..... :	2024-04-26 to 2024-05-26 (Original) 2024-07-26 to 2024-07-30

Test item:

Description..... :	**4G CPE 3s**
Trademark ..... :	LEIQU
Manufacturer..... :	Same as applicant
Model and/or type reference..... :	B313-321
Rating(s) ..... :	Input: 12V ⎓ 1A

Copy of marking plate:

The artwork of label below may be only a draft. The use of certification marks or other information on the product must be complies with the concerned standard.



Test case verdicts

Test case does not apply to the test object ..... : N/A (Not Applicable)

Test item does meet the requirement..... : P (Pass)

Test item does not meet the requirement..... : F (Fail)

Test case has not been checked ..... : —

GENERAL REMARKS:

- The test results presented in this report relate only to the object tested.
- This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
- When determining the test conclusion, the nominal variations in some test parameters have little effect on the uncertainty of the measurement result. The decision rules are based on IEC Guide 115 with complying the relevant requirements of environment and equipment.
- "(See Enclosure #)" refers to additional information appended to the report.
- "(See appended table)" refers to a table appended to the report.
- The harmonised standard EN 50564:2011 using which have been published for this purpose under the previously Commission Regulation in the Official Journal of the European Union.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

GENERAL PRODUCT INFORMATION:

Product Description –

- The equipment is a 4G CPE 3s using for electrical and electronic household and office equipment.
- The test samples were pre-production samples without serial numbers.
- The equipment is supplied by external power supply which test by ErP according to the the relevance regulation on ecodesign of external power supplies.
- The product shutdown mode power supply requirement only meets the requirements of 2025

Models difference:

- N/A

External Power Adapter :

Object/part No.	Manufacturer/ trademark	Type/model	Technical data
Adapter1	Dongguan Shilong Fuhua Electronic Co., Ltd	HW-120100E03	I/P: 100-240V~, 50/60Hz, 0.5A O/P: 12.0Vdc, 1.0A, 12.0W
Adapter2		HW-120100B03	
Adapter3	SHENZHEN HUNTKEY ELECTRIC CO., LTD	HW-120100E03	I/P: 100-240V~, 50/60Hz, 0.5A O/P: 12.0Vdc, 1.0A, 12.0W
Adapter4		HW-120100B03	
- Notes: Two models are same except different plug, the difference do not affect the result of power consumption.			

Report Summary –

- As this report is considered to be based on the BTL-ERP-1-S2404C226 report (dated 2024-06-14), the updated items are as follows:
- A. Update standard from “EC Regulation 1275/2008: 2008-12-18, EU Regulation 801/2013: 2013-08-22, EN 50564: 2011” to “Commission Regulation (EU) 2023/826”.
- B. Change product name
- C. Added test for off mode
- D. Added test WCDMA mode for SIM card
- E. Added adapter model HW-120100B03 and photo

- This report is deem to reissue from BTL-ERP-1-S2404C226A (R00) (issued 2024-08-02) and due to below items:

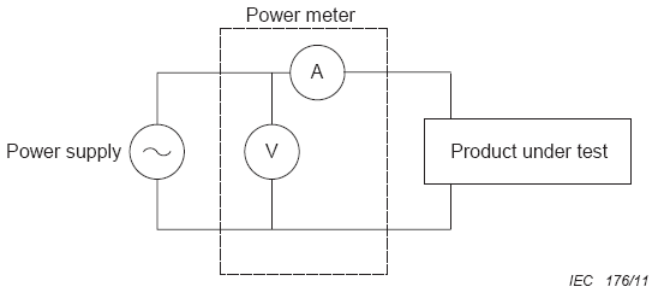
Report Version	Description	Issued Date
R00	Original Report	2024-08-02
R01	Add electronic signature	2024-08-07

-

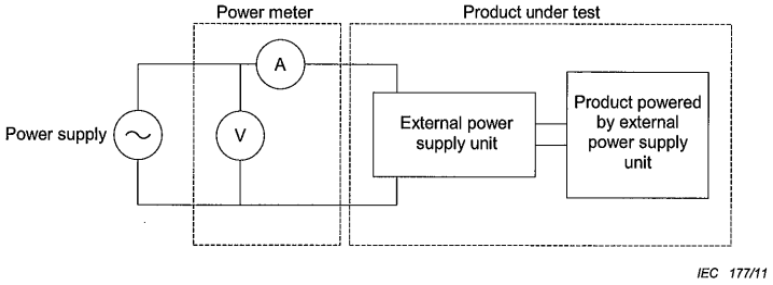
Category of equipment ……..…:	☒ Networked equipment ☐ Non-networked equipment
Category of networked equipment…:	☒ HiNA equipment ☐ Equipment with HiNA functionality ☐ Other networked equipment
Network connection port(s)……:	☒ wired ☒number and type of port(s): LAN/WAN port: 1 pcs(s) ☒ wireless ☐ not provided
Off mode……..…:	☒ Provided ☐ Not provided
Standby mode……..…:	☐ Provided ☒ Not provided
Information or Display Function…….:	☐ Provided ☒ Not provided
External power supply ……..…:	☒ Provided (Complied with the relevance regulation on ecodesign of external power supplies) ☐ Not provided

Connection arrangement for testing:

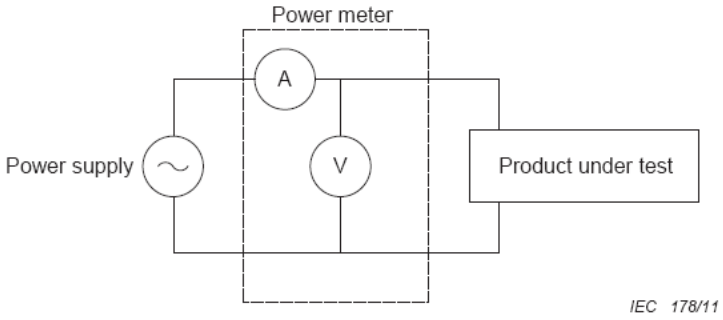
☐Connection 1: Connection arrangement for products powered directly from an a.c. power supply for lower power loads



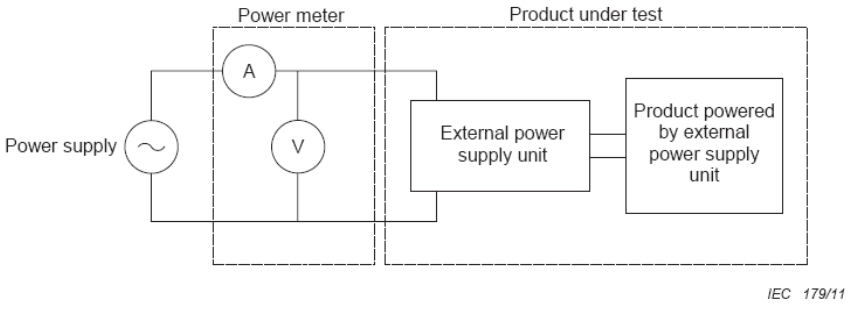
☒Connection 2: Connection arrangement for a product powered via an external power supply for lower power loads



☐Connection 3: Connection arrangement for a product powered directly from the a.c. main supply for higher power loads



☐Connection 4:Connection arrangement for a product powered via an external power supply for higher power loads



COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict

1	**Measurement of low power consumption**		**P**
1.2	General conditions for measurements	See below.	P
1.2.2	Ambient temperature (23 ± 5)°C	Ambient: 22.6°C	P
1.2.3	Air speed ≤ 0.5 m/s	Air speed: ≤ 0.36m/s	P
1.2.4	Test voltage 230 V ± 1%	(See appended TABLE 1 for the test result)	P
1.2.5	Test frequency 50 Hz ± 1%	(See appended TABLE 1 for the test result)	P
1.2.6	Total harmonic distortion of the electricity supply system ≤ 2%	Complied.	P
1.2.7	The ratio of peak value to r.m.s. value of the test voltage (i.e. crest factor) shall be between 1.34 and 1.49	Complied.	P
1.3	Power management uncertainty (See EN 50564 Annex D and the result complies with clause 4.4.1)		P
1.4	Information and documentation on the instrumentation, set-up and circuits used for electrical testing	Lower power loads measurement circuit used.	P

1.5	**Measurements procedure / method**		**P**
1.5.1	Name of mode	See below.	—
1.5.2	How is the mode selected or programmed	The product power consumption of networked standby and off mode within a mode is stable. The sampling method is the preferred method of measurement.	—
1.5.3	Sequence of events to reach the mode where the product automatically changes mode	Data recorded throughout the total period.	—
1.5.4	Test method	☒ Sampling method ☐ Average reading method ☐ Direct meter reading method	—
1.5.4.1	Sampling method	See below.	P
	Sampling interval	0.25s	—
	Total duration of test	See appended table.	—
	Measurement time	See appended table.	—
	Stability (mW/h)	See appended table.	—
	Limited applied	See appended table.	—
	Test result in W :	See appended table.	—

COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict
1.5.4.2	Average reading method		N/A
	Average power approach	Yes ☐ No ☐	—
	Accumulated energy approach	Yes ☐ No ☐	—
	Sampling interval		—
	Stability (mW/h)		—
	Measurement duration (Averaging / Accumulated)		—
	Limited applied		—
	Test result in W		—
1.5.4.3	Direct meter reading method		N/A
	Sampling interval		—
	Stability (mW/h)		—
	Measurement time		—
	Limited applied		—
	Test result in W		—

2.	**Energy efficiency requirements**		**P**
2.1	Power consumption in off mode	(See appended TABLE 1 for the test result)	P
	– From 2025, Power consumption of equipment in off mode shall not exceed 0.50 W		P
	– From 2027, Power consumption of equipment in off mode shall not exceed 0.30 W		--
2.2	Power consumption in standby mode		N/A
	The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and an indication of enabled reactivation function, shall not exceed 0.50 W		N/A
	The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display, or providing only a reactivation function and an indication of enabled reactivation function and information or status display shall not exceed 0.80 W. (except for household tumble driers covered by Commission Regulation (EU) No 932/2012 for which this value shall be 1.00 W.)		N/A
	Networked equipment that has one or more standby modes shall comply with the requirements for those standby modes when all wired network ports are		N/A

COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict
	disconnected and all wireless network ports are deactivated.		
2.3	Power consumption in networked standby		P
2.3.1	The power consumption of HiNA equipment or equipment with HiNA functionality	Test result see the appended table.	P
	– From 2025, in networked standby shall not exceed 8.00 W. Two years after the application of this Regulation, the power consumption of HiNA equipment or equipment with HiNA functionality		P
	– From 2027, in networked standby shall not exceed 7.00 W.		P
2.3.2	Other than HiNA equipment or equipment with HiNA functionality		N/A
	In networked standby shall not exceed 2.00 W		N/A

3.	**Functional requirements**		**P**
3.1	Availability of off mode and standby mode		P
	Equipment shall provide one or more of the following conditions: – off mode – standby mode – another condition which does not exceed the applicable power consumption requirements for off mode or standby mode when the equipment is connected to the mains power source.		P
3.2	Power management function for all equipment other than networked equipment		N/A
3.2.1	Power management function for all equipment other than networked equipment: Unless inappropriate for the intended use, equipment shall provide a power management function. When equipment is not providing a main function, and another energy-related product is not dependent on its functions, the power management function shall switch equipment, after the shortest possible period appropriate for the intended use of the equipment, automatically into either of the following conditions: – standby mode, – off mode, – another condition which does not exceed the applicable power consumption requirements for off mode or standby mode when the equipment is connected to the mains power source.		N/A

COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict
3.2.2	For household coffee machines, the period referred to in clause 3.2.1 shall be as follows: – for drip filter household coffee machines storing the coffee in an insulated jug, a maximum of five minutes; – for drip filter household coffee machines storing the coffee in a non-insulated jug, a maximum of 40 minutes; – for household coffee machines other than drip filter household coffee machines, a maximum of 30 minutes.		N/A
3.2.3	For other equipment, the period referred to in clause 3.2.1 shall not exceed 20 minutes.		N/A
3.2.4	The power management function described in clause 3.2.1 shall be activated when the equipment is placed on the market or put into service and activated with its initial setup after the equipment is reset to its factory default settings.		N/A
3.2.5	The equipment may offer the user the option to deactivate the power management function. In such cases the users shall be warned about the increased energy consumption of that action. That warning shall be included in the instruction manuals and, where applicable, be made available on the displays integrated in or connected to the equipment, excluding information or status displays. That option shall not be part of the installation procedure of the equipment and shall require a separate user action on the equipment.		N/A
3.3	Power management for networked equipment		P
3.3.1	Unless inappropriate for the intended use, equipment shall provide a power management function. When equipment is not performing a main function, and another energy-related product is not dependent on its functions, the power management function shall switch equipment, after the shortest possible period appropriate for the intended use of the equipment, automatically into networked standby. That period shall not exceed 20 minutes.	EUT can be automatically into networked standby mode in 20 min when main function was not provided.	P
3.3.2	In networked standby, the power management function may switch equipment automatically into standby mode or off mode or another condition, which does not exceed the applicable power consumption requirements for standby or off mode.		N/A
3.3.4	The power management function shall be available for all network ports of the networked equipment.		P
3.3.5	Unless all network ports are deactivated, the power management function shall be activated when the equipment is placed on the market or put into		P

COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict
	service. After the equipment is reset to its factory default settings, the power management function shall be activated if any of the network ports is activated.		
	The equipment may offer the user the option to deactivate the power management function. In such cases, the user shall be warned about the increased energy consumption of that action. That warning shall be included in the instruction manuals and, where applicable, be made available on the displays integrated in or connected to the equipment. That option shall not be part of the installation procedure of the equipment and shall require a separate user action on the equipment.		N/A
	Networked equipment other than HiNA equipment shall comply with the requirements set out in clause 3.2 when all wired network ports are disconnected and all wireless network ports are deactivated.		N/A
3.4	Possibility of deactivating wireless network connections		P
	Any networked equipment that can be connected to a wireless network shall offer the user the possibility to deactivate the wireless network connections. That requirement does not apply to equipment that relies on a single wireless network connection for intended use and have no wired network connection.		P
3.5	The indication ‘standby’ and its translations in all Union official languages shall not be used in describing, either alone or in combination with other information, any condition in which the equipment is not compliant with the requirements set out in clause 2.2 or 2.3.		P

4.	Information requirements		**P**
4.1	The instruction manuals for end-users, and free access websites of manufacturers, importers or authorised representatives shall include the following information for all equipment, as applicable:		P
4.1.1	For each off mode, standby mode (or another condition which does not exceed the applicable power consumption requirements for off mode or standby mode) and networked standby into which the equipment is switched by the power management function or similar function: – the power consumption expressed in watts rounded to the first decimal place; – the period after which the equipment reaches		P

COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict
	automatically standby mode, off mode or networked standby in minutes and rounded to the nearest minute		
4.1.2	The power consumption of the equipment in networked standby if all wired network ports are connected and all wireless network ports are activated	Test result see the appended table.	P
4.1.3	For equipment that needs an external power supply, but it is placed on the market without one, the manufacturer, importer or authorised representative shall provide information on the technical characteristics of the product model of the external power supply to be used with that equipment.	Placed on the market with an external power supply.	N/A
4.1.4	Guidance on how to activate and deactivate wireless network ports		P

COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict

TABLE 1: TEST RESULTS								**P**
Mode of operation	U_{in} (V) / Fn (Hz)	P_{in} (W)	I_{in} (mA)	THD (%)	Total duration	Test duration	Stability (mW/h)	Condition/status
OFF mode	230 / 50	0.354	5.85	0.088	60mins	40mins	0.108	--
Networked Standby mode	230 / 50	1.655	20.11	0.367	60mins	40mins	2.739	Only LAN port activity
	230 / 50	1.656	20.14	0.366	60mins	40mins	3.765	Only WAN port activity
	230 / 50	2.192	24.99	0.370	60mins	40mins	7.690	Only 2.4G port activity
	230 / 50	2.958	31.98	0.307	60mins	40mins	8.562	Only SIM (LTE) activate
	230 / 50	4.644	41.35	0.404	60mins	40mins	18.692	Only SIM (WCDMA) activate
The default time after which the power management function for automatically into standby mode, or off mode, or another condition.							N/A	
The default time after which the power management function for automatically into networked standby mode or another condition.							< 20min	
The power consumption of the product in networked standby if all wired network ports are connected and all wireless network ports are activated							5.213W	
Note: Test Adapter model: HW-120100E03 (Manufacturer: Dongguan Shilong Fuhua Electronic Co., Ltd)								

COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict

TABLE 1: TEST RESULTS								**P**
Mode of operation	U_{in} (V) / Fn (Hz)	P_{in} (W)	I_{in} (mA)	THD (%)	Total duration	Test duration	Stability (mW/h)	Condition/status
OFF mode	230 / 50	0.288	5.56	0.087	60mins	40mins	0.070	--
Networked Standby mode	230 / 50	1.655	20.85	0.246	60mins	40mins	0.524	Only LAN port activity
	230 / 50	1.606	20.81	0.261	60mins	40mins	0.018	Only WAN port activity
	230 / 50	2.157	27.74	0.296	60mins	40mins	0.282	Only 2.4G port activity
	230 / 50	3.119	36.52	0.380	60mins	40mins	1.010	Only SIM (LTE) activate
	230 / 50	4.574	50.04	0.389	60mins	40mins	31.504	Only SIM (WCDMA) activate
The default time after which the power management function for automatically into standby mode, or off mode, or another condition.							N/A	
The default time after which the power management function for automatically into networked standby mode or another condition.							< 20min	
The power consumption of the product in networked standby if all wired network ports are connected and all wireless network ports are activated							5.339W	
Note: Test Adapter model: HW-120100E03 (Manufacturer: SHENZHEN HUNTKEY ELECTRIC CO., LTD)								

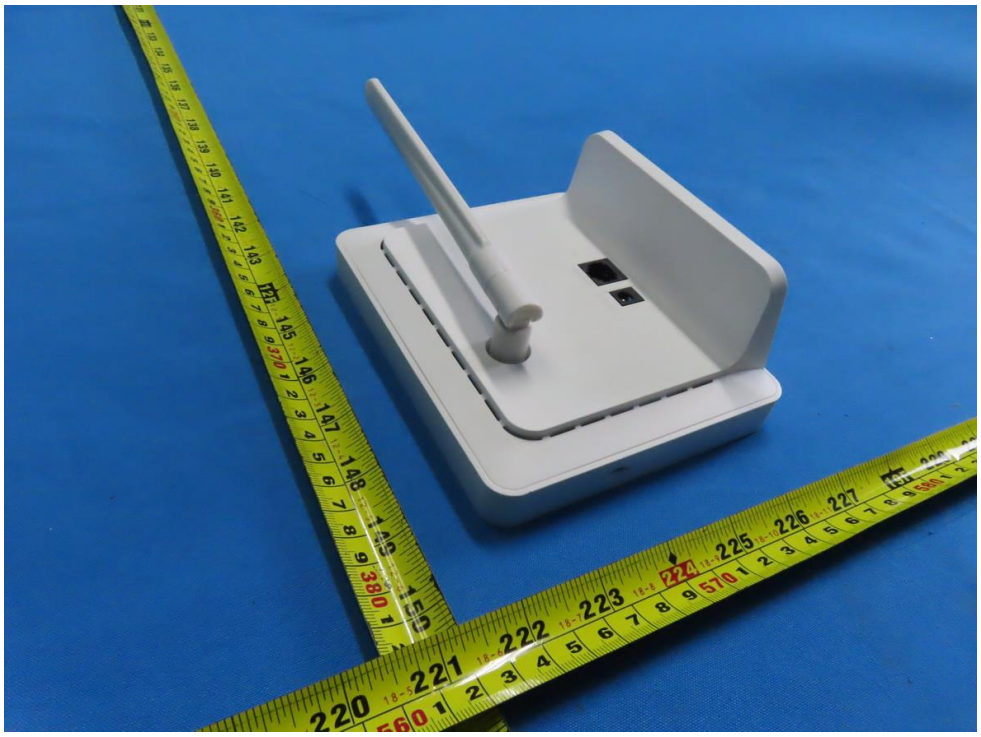
COMMISSION REGULATION (EU) 2023/826			
Clause	Requirement-test	Measuring result - Remark	Verdict

TABLE 2	**Summary of testing result(s)**				**P**
Item	Requirement - Limit				—
OFF mode	--		From 2025	≤ 0.50W	P
			From 2027	≤ 0.30W	--
Standby mode	Without information or status display		From 2025	≤ 0.50W	N/A
	With information or display function		From 2025	≤ 0.80W	N/A
Networked standby	HiNA equipment, or Equipment with HiNA functionality		From 2025	≤ 8.00W	P
			From 2027	≤ 7.00W	P
	Non-HiNA equipment		From 2025	≤ 2.00W	N/A
Power management (Period)	All equipment other than Household coffee machines and networked equipment		--	≤ 20 min	N/A
	Drip filter Household coffee machines		In an insulated jug	≤ 5 min	N/A
			In a non-insulated jug	≤ 40 min	N/A
	Household coffee machines other than drip filter household coffee machines		--	≤ 30 min	N/A
	Networked equipment		--	≤ 20 min	P
Stability	Input power ≤ 1W	≤10 mW/h			P
	Input power > 1W	1 % of the measured input power			P

List of test equipment used					
ID No	**DESCRIPTION**	**MANUF.**	**MODEL NO.**	**CAL. DATE**	**DUE DATE**
A13	Frequency Converdion Power Supply	Ainuo	AN97005H	2024-07-09	2025-07-08
HR15	Humidity & Temp. Recorder	ZOGLAB	DSR-THUA	2024-06-13	2025-06-12
HW2	Hot-Wire Anemometer	testo	405-V1	2024-04-22	2025-04-21
SW2	Stopwatch (0.1s-24hrs)	TIANFU	PC396	2024-07-05	2025-07-04
H-PM4	Power Meter	YOKOGAWA	WT310E	2024-01-21	2025-01-20

PHOTOS

External view – 1



External view – 2

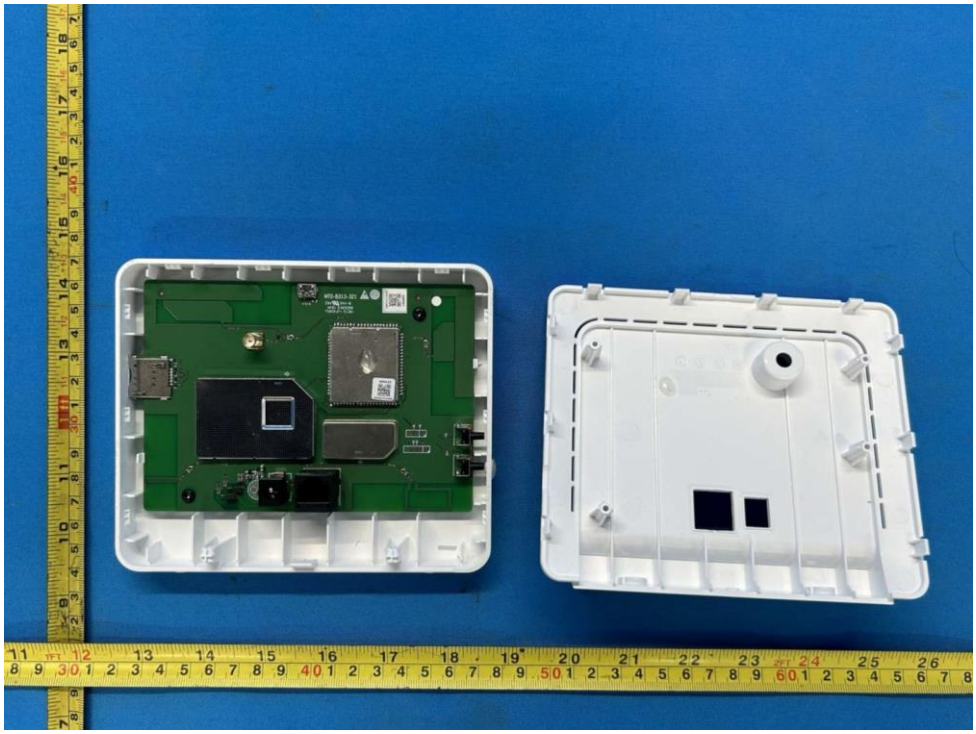
PHOTOS

Terminal view – 1

Terminal view – 2

PHOTOS

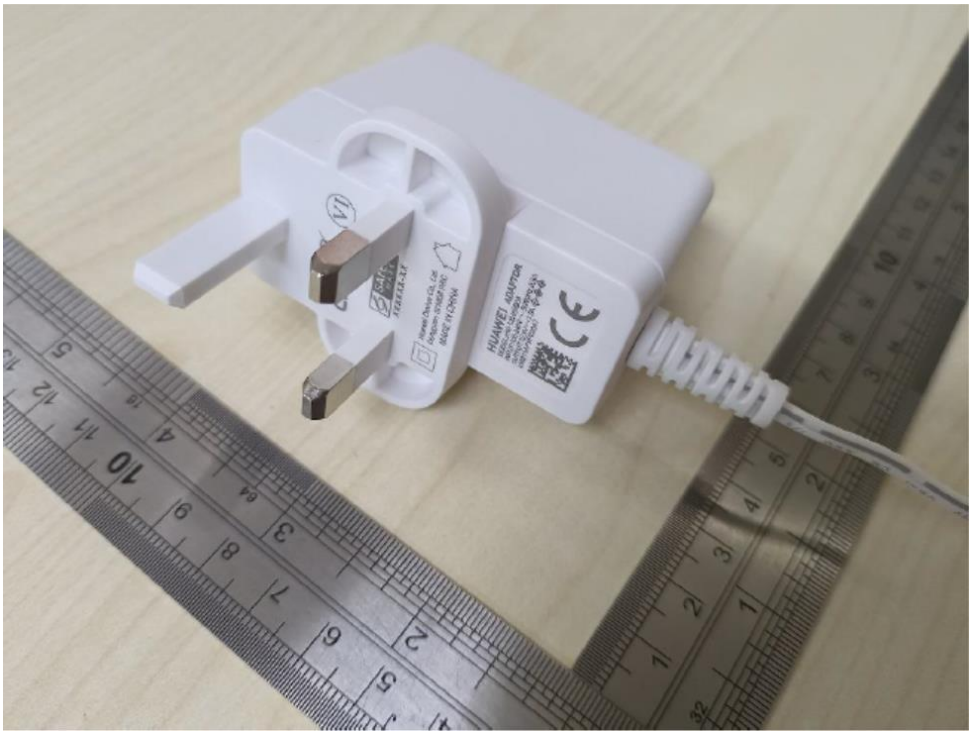
Terminal view – 3



Internal view

PHOTOS

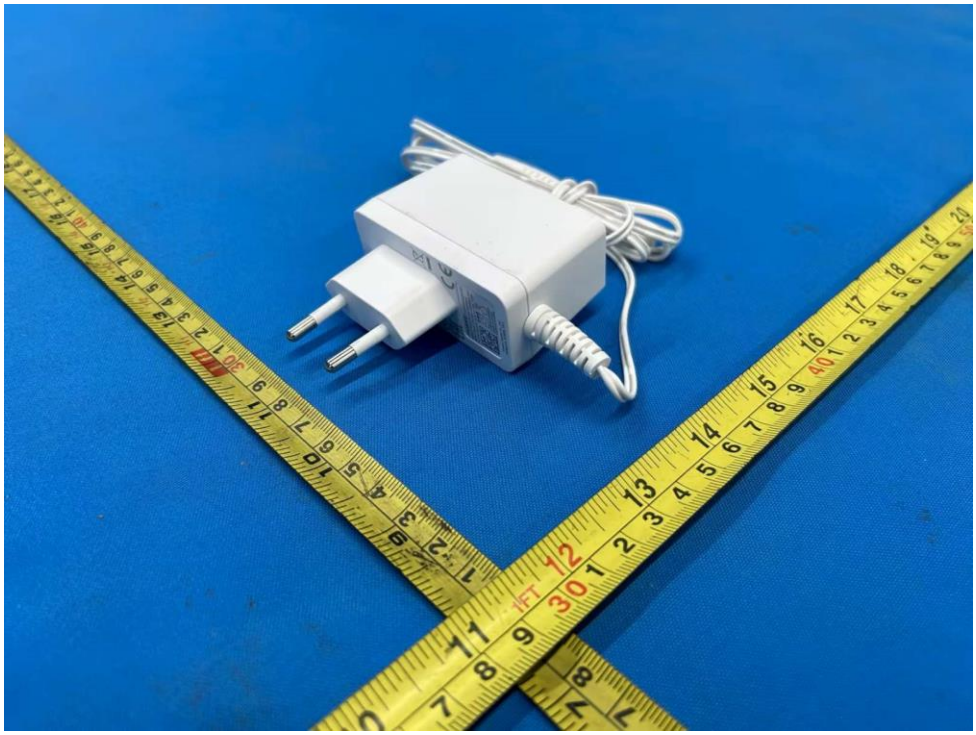
Adapter 1 view
(Manufacturer: Dongguan Shilong Fuhua Electronic Co., Ltd)



Adapter 2 view
(Manufacturer: Dongguan Shilong Fuhua Electronic Co., Ltd)

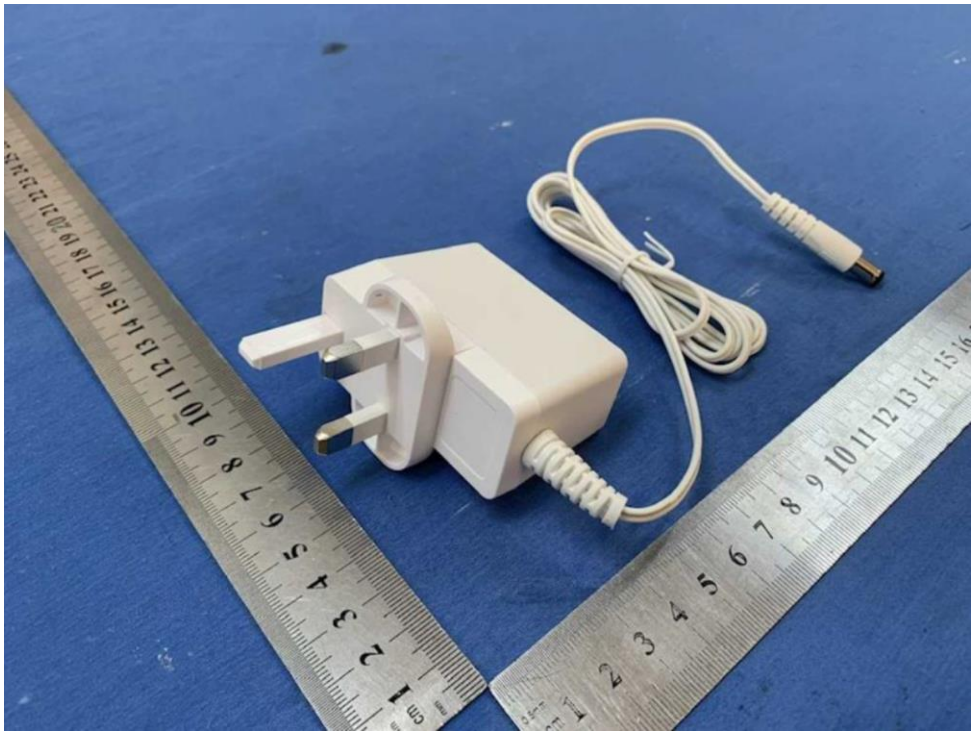
PHOTOS

Adapter label view
(Manufacturer: Dongguan Shilong Fuhua Electronic Co., Ltd)



Adapter 3 view
(Manufacturer: SHENZHEN HUNTKEY ELECTRIC CO., LTD)

PHOTOS



Adapter 4 view
(Manufacturer: SHENZHEN HUNTKEY ELECTRIC CO., LTD)

Adapter label view
(Manufacturer: SHENZHEN HUNTKEY ELECTRIC CO., LTD)

End of Test Report -