

**TEST REPORT****UL 4200A****Products Incorporating Button Batteries or Coin Cell Batteries**

Report Number.....: CTL2405072131-Q

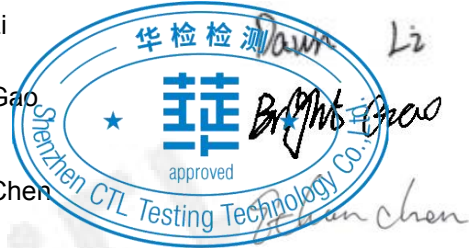
Tested by (name, signature).....: Dawn Li

Approved by (name, signature).....: Bright Gao

Supervised by (name, signature).....: Ethan Chen

Date of issue.....: May 22, 2024

Total number of pages.....: 22

Name of Testing Laboratory preparing the Report.....: **Shenzhen CTL Testing Technology Co., Ltd.**

Zone A, 1st Floor, Warehouse 2, Baisha Logistics Company, No. 3011 Shahe West Road, Nanshan District, Shenzhen

Applicant's name.....: Guangdong Yiru Keji Wenhua Chuanmei Youxiangongsi
Address.....: 101b Pan yu Da long jie bang jiang dong cun jiang yu da jie 53hao Guang zhou shi 510000 Guang dong sheng CN**Test specification:**

Standard.....: UL 4200A-2023, Edition 1

Test procedure.....: Type Test Report

Non-standard test method.....: N/A

Test Report Form No.....: UL4200A_1A

Test Report Form(s) Originator.....: CTL

Master TRF.....: Dated 2024-03-11

Test item description.....: Carbon Monoxide Gas Detector

Trademark(s).....: GZAIR

Manufacturer.....: Guangdong Yiru Keji Wenhua Chuanmei Youxiangongsi

Address.....: 101b Pan yu Da long jie bang jiang dong cun jiang yu da jie 53hao Guang zhou shi 510000 Guang dong sheng CN

Model/Type reference.....: SA-V1000+, SA-V1000, SA103, SA-V108

Ratings.....: 6.0V---0.01A



General disclaimer:

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. The authenticity of this Test Report and its contents can be verified by contacting the Testing Laboratory, responsible for this Test Report.

List of Attachments (including a total number of pages in each attachment):

Attachment 1: Warning Instructions, 1 Page;

Attachment 2: Photo document, 3 Pages.

Summary of testing:

Tests performed (name of test, test clause and date test performed):

6.3.2 Drop test for portable devices and hand-held products

6.3.3 Impact test

6.3.4 Crush test

7D Marking test

Testing location:

Shenzhen CTL Testing Technology Co., Ltd.

Zone A, 1st Floor, Warehouse 2, Baisha Logistics Company, No. 3011 Shahe West Road, Nanshan District, Shenzhen

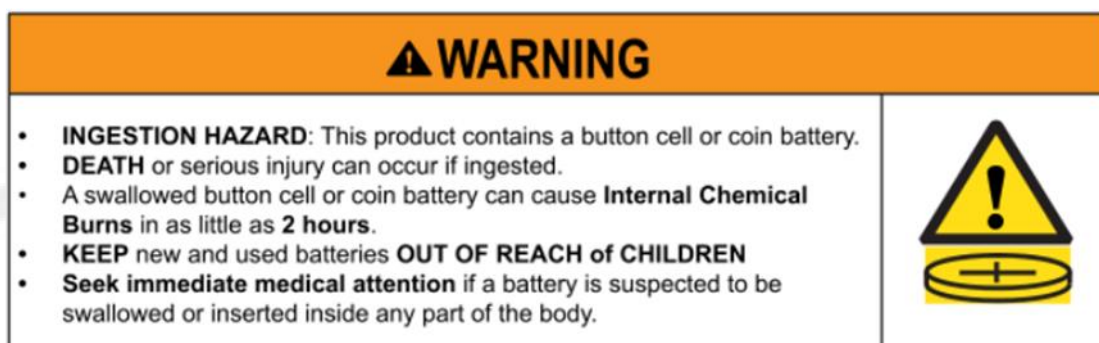
Copy of product warning marking for cell/ button battery:

The artwork below may be only a draft.



Copy of packaging warning marking for cell/ button battery:

The artwork below may be only a draft.



Danger of explosion if battery is incorrectly replaced. Replace only with the CR2032 or equivalent type.

Coin / button cell rated voltage: 3.0Vd.c



Possible test case verdicts:

- test case does not apply to the test object..... : N/A
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement..... : F (Fail)

Testing..... :

Date of receipt of test item..... : May 10, 2024

Date (s) of performance of tests..... : May 10, 2024 to May 17, 2024

Test item particulars:

Equipment mobility..... : ☐ Hand-held product ☒ Portable device
☐ other

Battery compartment fixing by..... : ☐ Screw(s) ☒ Snap-in devices
☐ other:

Button / coin cell batteries type..... : ☐ LR44 ☐ LR754 ☐ LR626 ☒ CR2032
☐ CR2025 ☐ CR2450 ☐ other:

Mass of equipment (kg) : 0.07 kg

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

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

General product information and other remarks:

Model difference: All the models are identical except for model designation.
All tests were conducted on the model SA-V1000+ to representative others.

Product contains one coin battery, and it is mounted on the PCB board, housed with plastic enclosure.

UL4200A_1A			
Clause	Requirement + Test	Result - Remark	Verdict

CONSTRUCTION			
4	Products with Button/Coin Cell Batteries		P
5.1	Products that use button/coin cell batteries shall be designed to minimize the risk of children removing and ingesting or aspirating the batteries.		P
	Products that allow user removal or replacement of button/coin cells shall comply with the requirements of 5.2 – 5.6.		P
	Products with button/coin cells that are not intended to allow user removal/replacement of the cells shall comply with 5.7.		N/A
5.2	To reduce the likelihood of unintentional access, products with removable or replaceable button/coin cell batteries shall not allow the button/coin cell to be contacted by Test Probe 11 of the Standard for Protection of Persons and Equipment by Enclosures – Probes for Verification, IEC 61032 when applied as described in 5.3.		P
5.3	The probe shall be applied to any depth that the opening will permit and shall be rotated or angled before, during, and after insertion through the opening to any position that is necessary to examine the enclosure. The probe shall be used as a measuring instrument to judge the accessibility provided by an opening, and not as an instrument to judge the strength of a material. The probe shall be applied with the minimum force necessary to determine accessibility.		P
5.4	During the examination of a product to determine whether it complies with the requirements in 5.3, a part of the enclosure that may be opened or removed by the user, either without using a tool or with less effort than two independent and simultaneous movements by hand, is to be opened or removed.		P
5.4A	If a part of the battery compartment enclosure is protected by pliable material such as fabric, paper, foam, or vinyl, or a pliable material with a seam, apply the Tension Test for Seams in Stuffed Toys and Beanbag-Type Toys test in the Standard Consumer Safety Specification for Toy Safety, ASTM F963, to determine whether the battery compartment enclosure can become exposed or accessible, using a force of at least 70.0 N (15.7 lbf).		P

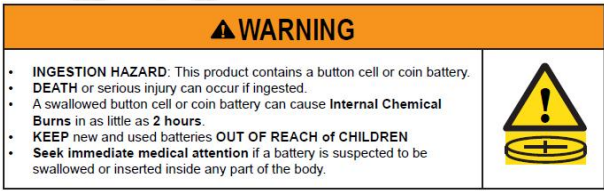
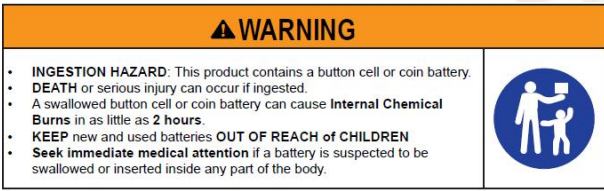
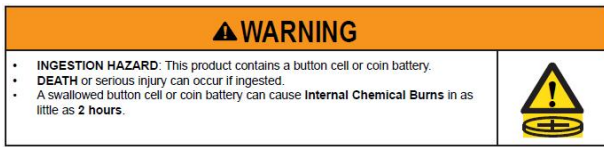
UL4200A_1A			
Clause	Requirement + Test	Result - Remark	Verdict
	If a new part of the battery compartment enclosure becomes exposed or accessible, repeat 5.4 and remove any further pliable material that is then exposed until no new part of the battery compartment enclosure becomes exposed or accessible, and then conduct the test in 5.3.		N/A
5.5	Products that locate removable or replaceable button/coin cell batteries inside a battery compartment shall be designed to prevent children from removing the battery by one of the following methods in (a) or (b) below. Compliance is checked by the tests of Section 6.		P
	a) A tool, such as a screwdriver or monetary coin, is required to open the battery compartment. For a battery compartment secured by a screw or a twist-on access cover, a minimum torque of 0.5 Nm and a minimum angle of 90 degrees of rotation shall be required to open the compartment or the fastener shall engage a minimum of two full threads; or		N/A
	b) The battery compartment door or cover requires the application of a minimum of two independent and simultaneous movements to open by hand. The movements to open shall not be combinable to a single movement with a single finger or digit.		P
5.6	If screws or similar fasteners are used to secure the door or cover providing access to a battery compartment, the fasteners shall be captive to the door, cover, or device.		P
	Exception No. 1: Applies to products containing button batteries or coin cell batteries not intended to be replaced by the consumer. Products containing button batteries or coin cell batteries that can only be accessed through the removal of multiple enclosures or panels using a tool do not need captive screws. Such products shall have instructions and warnings that clearly state the battery is not to be replaced by the consumer.		N/A
	Exception No. 2: Applies to products containing batteries not intended to be replaced by the consumer. Products that are only to be opened by a professional service center (where children are not present) are not required to have secured screws. Such products shall have instructions and warnings that clearly state the battery is not to be replaced by the consumer.		N/A
5.7	Products that incorporate button/coin cells that are not intended for user removal or replacement shall effectively prevent removal of the battery by the user or children. The button/coin cell shall be:		N/A
	a) Made inaccessible by an enclosure or similar means that passes the applicable tests of 6.2 and 6.3; or		N/A


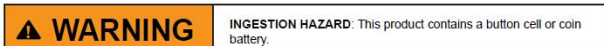

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Clause	Requirement + Test	Result - Remark	Verdict
	b) Held fully captive by the use of soldering, fasteners such as rivets, or equivalent means. The securement method shall pass the Secureness Test of 6.4.		N/A
PERFORMANCE			
6	Protection from Ingestion or Aspiration of Button/Coin Cell Batteries		P
6.1	General Products shall not present a risk of unintentional access by children to button/coin cells. Button/coin cell batteries shall not be accessible or liberated from the product as a result of mechanical abuse tests in applicable safety standards for the product, and products with button/coin cells shall comply with the tests in 6.2 – 6.4.		P
6.2	Pre-conditioning		P
6.2.1	One test sample shall be subjected to the following pre-conditioning conditions in sequence prior to testing in 6.3 and 6.4, as applicable:		P
	a) Stress Relief Test – A product with an enclosure, battery compartment door/cover or battery compartment door/cover opening mechanism made of molded or formed thermoplastic materials shall be subjected to a stress relief test. A sample of the complete product is to be placed in a circulating air oven for a period of 7 h. The oven temperature is to be set to the higher of (1) or (2) below. After removal from the oven, the sample is permitted to cool to room temperature. 1) 70°C (158°F); or 2) 10°C (18°F) higher than the maximum temperature of thermoplastic enclosures, battery compartment door/covers, or battery compartment door/cover mechanisms during the most stringent normal operation of the device.	(See table 6.2.1 a)	P
	b) Battery Replacement Test – The battery compartment door/cover shall be opened and closed, and the battery removed and replaced, for a total of ten cycles. The process shall simulate replacement according to the manufacturer's instructions. If the battery compartment is secured with a screw(s), the screw(s) is to be loosened and then tightened by means of a suitable screwdriver, applying a continuous linear torque according to the Torque to be Applied to Screws table, Table 20, of the Standard for Audio, Video and Similar Electronic Apparatus – Safety Requirements, UL 60065.	(See table 6.2.1 b)	P
6.3	Abuse tests		P
6.3.1	General		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.3.1.1	The tests in 6.3.2 – 6.3.4 shall be performed sequentially, as applicable, on one pre-conditioned sample of the product. After all test conditions have been completed, compliance is checked by 6.3.5.		P
6.3.2	Drop test for portable devices and hand-held products		P
6.3.2.1	Portable devices are subjected to drop tests from a height of 1.0 m (39.4 in) onto a horizontal hardwood surface in positions likely to produce the maximum force on the battery compartment or enclosure. Portable devices are subjected to three drops, except hand-held products are subjected to ten drops. The hardwood surface shall be at least 13-mm (1/2-in) thick, mounted on two layers of nominal 19-mm (3/4-in) thick plywood, placed on a concrete or equivalent non-resilient surface.	(See Table 6.3.2)	P
6.3.3	Impact test		P
6.3.3.1	The enclosure or battery compartment door/cover shall be subject to three, 2J (1.5ft·lbf) impacts. This impact is to be produced by dropping a steel sphere, 50.8 mm (2 inches) in diameter, and weighing approximately 0.5 kg (1.1 lb) from the height required to produce the specified impact, as shown in Figure 6.1, or the steel sphere is to be suspended by a cord and swung as a pendulum, dropping through the vertical distance required to cause it to strike the surface with the specified impact as shown in Figure 6.2. The steel sphere is to strike the battery compartment door/cover perpendicular to the enclosure surface.	(See Table 6.3.3)	P
6.3.4	Crush test The sample is to be supported by a fixed rigid supporting surface, in positions likely to produce the most adverse results as long as the position can be self-supported. A crushing force of 330 ± 5 N (74.2 ± 1.1 lbf) is applied for a period of 10 s to the exposed surfaces. The force is to be applied by a flat surface measuring approximately 100 by 250 mm (3.9 by 9.8 in).	(See Table 6.3.4)	P
6.3.4A	Torque test If a child can grasp any part of the battery compartment enclosure on a consumer product, including the door or cover, with at least the thumb and forefinger, or using teeth, apply the Torque Test for Removal of Components from the Standard Consumer Safety Specification for Toy Safety, ASTM F963, to the battery compartment enclosure, using a torque of at least 0.50 Nm (4.4 in·lbf).	(See Table 6.3.4A)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.3.4B	Tension test If a child can grasp any part of the battery compartment enclosure on a consumer product, including the door or cover, with at least the thumb and forefinger, or using teeth, apply the Tension Test for Removal of Components from the Standard Consumer Safety Specification for Toy Safety, ASTM F963, to the battery compartment enclosure, using a force of at least 72.0 N (16.2 lbf).	(See Table 6.3.4B)	N/A
6.3.4C	Compression test 6.3.4C.1 If any surface of the battery compartment enclosure is accessible to a child and inaccessible to a flat surface contact during the Drop test in 6.3.2, apply the Compression Test from the Standard Consumer Safety Specification for Toy Safety, ASTM F963, to that surface, using a force of at least 136 N (30.6 lbf).	(See Table 6.3.4C)	N/A
6.3.5	Compliance After the tests of 6.3.2 – 6.3.4B, a force of 50 +10/-0 N (11.2 +2.2/-0 lbf) is applied for 10 s to the battery compartment door/cover or enclosure by a rigid test finger according to Test Probe 11 of the Standard for Protection of Persons and Equipment by Enclosures – Probes for Verification, IEC 61032. The probe is applied at the most unfavorable place and in the most unfavorable direction. The force shall be applied in only one direction. A battery compartment door/cover shall not open and shall remain functional. The battery shall not be accessible.		P
6.4	Secureness test Button/coin cells that are not intended for user removal or replacement, and are accessible based on 5.3 and 5.4, shall comply with the following test. Compliance is checked by application of a test hook as shown in Figure 6.3, with a force of 20 ±2 N (4.5 ±0.4 lbf), directed outwards, applied for 10 s at all points where this is possible. During the test, the button/coin cell shall not become separated from the product.	(See Table 6.4)	N/A
MARKINGS			
7	Protection from Ingestion or Aspiration of Button/Coin Cell Batteries		P
7A	General		—
7A.1	All warning statements or icons shall be prominent, legible, easily discernable under normal lighting conditions, and permanently marked.		P

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Clause	Requirement + Test					Result - Remark		Verdict																																																																																										
7A.2	Unless otherwise specified, instructional safeguards do not have to be in multiple colors. If an instructional safeguard is present in more than one color to indicate hazard severity, the color shall be in accordance with the ISO 3864 series.							P																																																																																										
7A.3	Printed or screened markings shall also be permanent.							P																																																																																										
7A.4	Legibility of markings is determined by inspection. Permanency is determined by the tests of Section 7D, Permanence of Markings.							P																																																																																										
7A.5	Markings must be in the official language(s) of the country where the product is sold or in English if there is no official language(s).							P																																																																																										
7A.6	The safety alert symbol, an exclamation mark in a triangle, when used with the signal word, must precede the signal word. The base of the safety alert symbol must be on the same horizontal line as the base of the letters of the signal word. The height of the safety alert symbol must equal or exceed the signal word letter height.							P																																																																																										
7A.7	Certain text in the message panel must be in bold and in capital letters as shown in the example warning labels to get the attention of the reader.							P																																																																																										
7A.8	For labels that are provided on a sticker, hang tag, instructions or manual, the safety alert symbol and the signal word “WARNING” must be at least 0.2 in (5 mm) high. The remainder of the text must be in characters whose upper case must be at least 0.1 in (2.5 mm), except where otherwise specified.							P																																																																																										
7A.9	<p>For labels that are required to be on the packaging of consumer products and directly on consumer products, text size shall be dependent on the area of the principal display panel. Text size shall be determined based on Table 7A.1.</p> <p>Table 7A.1 -Letter Size for Warning Labels</p> <table><tr><th colspan="9">Letter Size Measurements in Inches</th></tr><tr><td>Display Area: Inches²</td><td>0 – 2</td><td>+2 – 5</td><td>+5 – 10</td><td>+10 – 15</td><td>+15 – 30</td><td>+30 – 100</td><td>+100 – 400</td><td>+400</td></tr><tr><td>Signal word (WARNING)</td><td>3/64</td><td>1/16</td><td>3/32</td><td>7/64</td><td>1/8</td><td>5/32</td><td>1/4</td><td>1/2</td></tr><tr><td>Statement of Hazard</td><td>3/64</td><td>3/64</td><td>1/16</td><td>3/32</td><td>3/32</td><td>7/64</td><td>5/32</td><td>1/4</td></tr><tr><td>Other Text</td><td>1/32</td><td>3/64</td><td>1/16</td><td>1/16</td><td>5/64</td><td>3/32</td><td>7/64</td><td>5/32</td></tr><tr><th colspan="9">Letter Size Measurements in cm (For Reference Only)</th></tr><tr><td>Display Area: cm²</td><td>0-13</td><td>+13 – 32</td><td>+32 – 65</td><td>+65 – 97</td><td>+97 – 194</td><td>+194 – 645</td><td>+645 – 2,581</td><td>+2,581</td></tr><tr><td>Signal word (WARNING)</td><td>0.119</td><td>0.159</td><td>0.238</td><td>0.278</td><td>0.318</td><td>0.397</td><td>0.635</td><td>1.27</td></tr><tr><td>Statement of Hazard</td><td>0.119</td><td>0.119</td><td>0.159</td><td>0.238</td><td>0.238</td><td>0.278</td><td>0.397</td><td>0.635</td></tr><tr><td>Other Text</td><td>0.079</td><td>0.119</td><td>0.159</td><td>0.159</td><td>0.198</td><td>0.238</td><td>0.278</td><td>0.397</td></tr></table>					Letter Size Measurements in Inches									Display Area: Inches²	0 – 2	+2 – 5	+5 – 10	+10 – 15	+15 – 30	+30 – 100	+100 – 400	+400	Signal word (WARNING)	3/64	1/16	3/32	7/64	1/8	5/32	1/4	1/2	Statement of Hazard	3/64	3/64	1/16	3/32	3/32	7/64	5/32	1/4	Other Text	1/32	3/64	1/16	1/16	5/64	3/32	7/64	5/32	Letter Size Measurements in cm (For Reference Only)									Display Area: cm²	0-13	+13 – 32	+32 – 65	+65 – 97	+97 – 194	+194 – 645	+645 – 2,581	+2,581	Signal word (WARNING)	0.119	0.159	0.238	0.278	0.318	0.397	0.635	1.27	Statement of Hazard	0.119	0.119	0.159	0.238	0.238	0.278	0.397	0.635	Other Text	0.079	0.119	0.159	0.159	0.198	0.238	0.278	0.397			P
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7B	Packaging Markings							P																																																																																										
7B.1	Except as allowed in 7B.2 and 7B.3, the principal display panel shall contain the warning label in Figure 7B.1 or Figure 7B.2.							P																																																																																										

UL4200A_1A			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>The icon in Figure 7B.1 shall be at least 7 mm in width and 9 mm in height.</p> <p>Figure 7B.1_ Packaging Marking – Warning: Contains coin battery</p> 		P
	<p>The icon in Figure 7B.2 shall be at least 8 mm (0.31 in) in diameter.</p> <p>Figure 7B.2_ Packaging Marking – Warning of ingestion Hazard</p> 		N/A
	<p>The text in the warning label shall be as shown in Figure 7B.1 or Figure 7B.2. When on a printed label using more than one color the marking must use colors as shown in Figure 7B.1 or Figure 7B.2.</p>		P
7B.2	<p>Consumer products that are not contained in packaging shall have the warning label in Figure 7B.1 or Figure 7B.2 affixed to the consumer product with a hang tag or a sticker label.</p>		N/A
7B.3	<p>When space on the principal display panel of the consumer product packaging does not permit the warning label in Figure 7B.1 or Figure 7B.2, the principal display panel shall include the warning in Figure 7B.3 in a conspicuous location.</p> <p>Figure 7B.3_ Packaging Marking – Alternative Principal Display Panel</p> 		N/A
	<p>The icon shall be at least 7 mm in width and 9 mm in height.</p>		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	<p>The remaining warning statements must be on a secondary display panel, as shown in Figure 7B.4.</p> <p>Figure 7B.4._Packaging Marking – Secondary Display Panel</p> 		N/A
	The text in the warning labels shall be as shown in Figure 7B.3 and Figure 7B.4.		N/A
	When on a printed label using more than one color the marking must use colors as shown in Figure 7B.3 and Figure 7B.4.		N/A
7B.4	The principal display panel or secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label, shall include the following text:		P
	a) For products with non-replaceable batteries, include a statement indicating the product contains non-replaceable batteries;		N/A
	b) Battery type (e.g., LR44, CR2032); and c) Nominal voltage.		P
7C	Product Markings		P
7C.1	Except as provided in 7C.2 and 7C.3, consumer products shall be marked with a warning label on the product display panel that alerts the consumer of the presence of a button cell or coin battery. The warning text shall include the safety alert symbol, signal word, and text, as shown in Figure 7C.1.		N/A
	<p>When on a printed label using more than one color the marking must use the color as shown in Figure 7C.1.</p> <p>Figure 7C.1_Product Marking</p> 		N/A
7C.2	<p>When space on the product is limited, use the “Warning: contains coin battery” icon shown in Figure 7C.2, without text.</p> <p>Figure 7C.2_ Alternative Product Marking</p> 		P
	The icon must be at least 7 mm in width and 9 mm in height and must be on the product display panel.		P

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Clause	Requirement + Test	Result - Remark	Verdict
	When on a printed label using more than one color the marking must use the color as shown in Figure 7C.2. The icon shall be defined in accompanying printed materials such as instructions, manual, insert, or hangtag.		P
7C.3	When the product itself is too small to include the warning with text in Figure 7C.1 or the icon in Figure 7C.2, the product shall:		N/A
	a) Have packaging containing the warning label following the requirements in Section 7B, Packaging Markings; or		N/A
	b) Contain a hangtag or sticker label with the full warning label using requirements in Section 7B, Packaging Markings.		N/A
7D	Permanence of Markings		P
7D.1	General Each required printed or screened marking shall be tested. However, if the data sheet for a label confirms compliance with the test requirements, the test need not be performed.		P
7D.2	Testing procedure 7D.2.1 The test is conducted by rubbing the marking by hand without appreciable force for 15 s with a piece of cloth soaked with water and at a different place or on a different sample for 15 s with a piece of cloth soaked with the petroleum spirit specified in 7D.3.		P
7D.3	Petroleum spirit Petroleum spirit is a reagent grade hexane with a minimum of 85 % n-hexane. NOTE: The designation "n-hexane" is chemical nomenclature for "a "normal" or straight chain hydrocarbon. The CAS (American Chemical Society) number of n-hexane is CAS#110-54-3.		P
7D.4	Compliance criteria 7D.4.1 After each test, the marking shall remain legible. If the marking is on a separable label, the label shall show no curling and shall not be removable by hand.	(See Table 7D)	P
INSTRUCTIONS			
9	General		P
9.1	Instructions and manuals, if provided, shall include all of the applicable markings in Figure 7B.1 or Figure 7B.2 and the statements noted below. If instructions and manuals are not provided, the statements shall be present on the principal display panel or secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label.		P

UL4200A_1A			
Clause	Requirement + Test	Result - Remark	Verdict
	a) The statement "Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate."		P
	b) The statement "Even used batteries may cause severe injury or death."		P
	c) The statement "Call a local poison control center for treatment information."		P
	d) A statement indicating the compatible battery type (e.g., LR44, CR2032).	CR2032	P
	e) A statement indicating the nominal battery voltage.	3.0V	P
	f) The statement "Non-rechargeable batteries are not to be recharged."		P
	g) The statement "Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns."		P
9.2	Products with replaceable button/coin cell batteries shall additionally include:		P
	a) The statement "Ensure the batteries are installed correctly according to polarity (+ and -)."		P
	b) The statement "Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries."		P
	c) The statement "Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations."		P
	d) The statement "Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children."		P
9.3	Products with non-replaceable button/coin cell batteries shall additionally include a statement indicating the product contains non-replaceable batteries.		N/A

UL4200A_1A			
Clause	Requirement + Test	Result - Remark	Verdict

6.2.1 a	TABLE: Stress relief test					P
Location/Part	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation	
Battery compartment door/cover	Plastic	Min thickness 0.65mm	<input checked="" type="checkbox"/> 70°C, or <input type="checkbox"/> Max. T_{ma} _____ +70°C = _____ 70°C.	7h	No hazards	
Supplementary information: T_{ma} : The maximum temperature of thermoplastic enclosures, battery compartment door/covers, or battery compartment door/cover mechanisms during the most stringent normal operation of the device. Refer to table 6.2.1 (2) for detail.						

6.2.1 a (2)	TABLE: Normal operation temperature measurements					P
Operation condition.....:	1) Normal work 2) N/A 3) N/A 4) N/A 5) N/A					
Test item.....:	1	2	3	4	5	
Supply voltage (V).....:	6.0	--	--	--	--	
Ambient temperature during test T_{amb} (°C).....:	25.0	--	--	--	--	
Maximum measured temperature T of part/at:	T (°C)					
Plastic enclosure inside	25.7	--	--	--	--	
Plastic enclosure outside	25.5	--	--	--	--	
Supplementary information:						

6.2.1 b	TABLE: Battery replacement test		P
Battery part no.....:	CR2032		—
Battery Installation/withdrawal	Battery Installation/Removal Cycle		Comments
Battery compartment door/cover	1, Battery Installation/Removal		No hazards
	2, Battery Installation/Removal		No hazards
	3, Battery Installation/Removal		No hazards
	4, Battery Installation/Removal		No hazards
	5, Battery Installation/Removal		No hazards
	6, Battery Installation/Removal		No hazards
	8, Battery Installation/Removal		No hazards

UL4200A_1A			
Clause	Requirement + Test	Result - Remark	Verdict
		9, Battery Installation/Removal	No hazards
		10, Battery Installation/Removal	No hazards
Supplementary information:			

6.3.2	TABLE: Drop test					P
Location/Part	Material	Thickness (mm)	Height (mm)	Drops times	Observation	
Top	Plastic	Min thickness 0.65	1000	3	Battery compartment door/cover was not opened and remained functional. The battery was not being accessible.	
Side	Plastic	Min thickness 0.65	1000	3	Battery compartment door/cover was not opened and remained functional. The battery was not being accessible.	
Bottom	Plastic	Min thickness 0.65	1000	3	Battery compartment door/cover was not opened and remained functional. The battery was not being accessible.	
Supplementary information: Portable devices are subjected to three drops, except hand-held products are subjected to ten drops.						

6.3.3	TABLE: Impact test					P
Location/Part	Material	Thickness (mm)	Height (mm)	Impact times	Observation	
Top	Plastic	Min thickness 0.65	408	3	Battery compartment door/cover was not opened and remained functional. The battery was not being accessible.	
Side	Plastic	Min thickness 0.65	408	3	Battery compartment door/cover was not opened and remained functional. The battery was not being accessible.	

UL4200A_1A					
Clause	Requirement + Test			Result - Remark	
Bottom	Plastic	Min thickness 0.65	408	3	Battery compartment door/cover was not opened and remained functional. The battery was not being accessible.
Supplementary information:					

6.3.4	TABLE: Crush test					P
Location/Part	Material	Thickness (mm)	Force (N)	Test Duration (s)	Observation	
Battery compartment door/cover	Plastic	Min thickness 0.65	330	10	Battery compartment door/cover was not opened and remained functional. The battery was not being accessible.	
Supplementary information:						

6.3.4A	TABLE: Torque test				N/A
Location/Part	Material	Applied torque (Nm)	Maintenance Duration (s)	Observation	
--	--	--	--	--	
Supplementary information:					

6.3.4B	TABLE: Tension test				N/A
Location/Part	Material	Applied force (N)	Test Duration (s)	Observation	
--	--	--	--	--	
Supplementary information:					

6.3.4C	TABLE: Compression test				N/A
Location/Part	Material	Applied force (N)	Test Duration (s)	Observation	
--	--	--	--	--	
Supplementary information:					

UL4200A_1A			
Clause	Requirement + Test	Result - Remark	Verdict

6.4	TABLE: Secureness test					N/A
Location/Part	Material	Thickness (mm)	Force (N)	Test Duration (s)	Observation	
--	--	--	--	--	--	
Supplementary information:						

7D	TABLE: Permanence of Markings test			P
Description of Marking		Applied rubbing substance	Rubbing Duration (s)	Observation
Product marking		Water, petroleum spirit	15s, 15s	After test the marking was legible, it cannot easily removable from the surface and show no curling at its edges.
Packaging marking		Water, petroleum spirit	15s, 15s	After test the marking was legible, it cannot easily removable from the surface and show no curling at its edges.
Supplementary information:				

Attachment 1: Warning Instructions**IMPORTANT SAFETY INSTRUCTIONS**

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
3. Even used batteries may cause severe injury or death.
4. Call a local poison control center for treatment information.
5. Danger of explosion if battery is incorrectly replaced. Replace only with the CR2032 or equivalent type.
6. Coin / button cell rated voltage: 3.0Vd.c.
7. Non-rechargeable batteries are not to be recharged.
8. Do not force discharge, recharge, disassemble, heat above 70 degree C or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
9. Ensure the batteries are installed correctly according to polarity (+ and -).
10. Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
11. Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
12. Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

SAVE THESE INSTRUCTIONS

Attachment 2: Photo document**Photo 1**

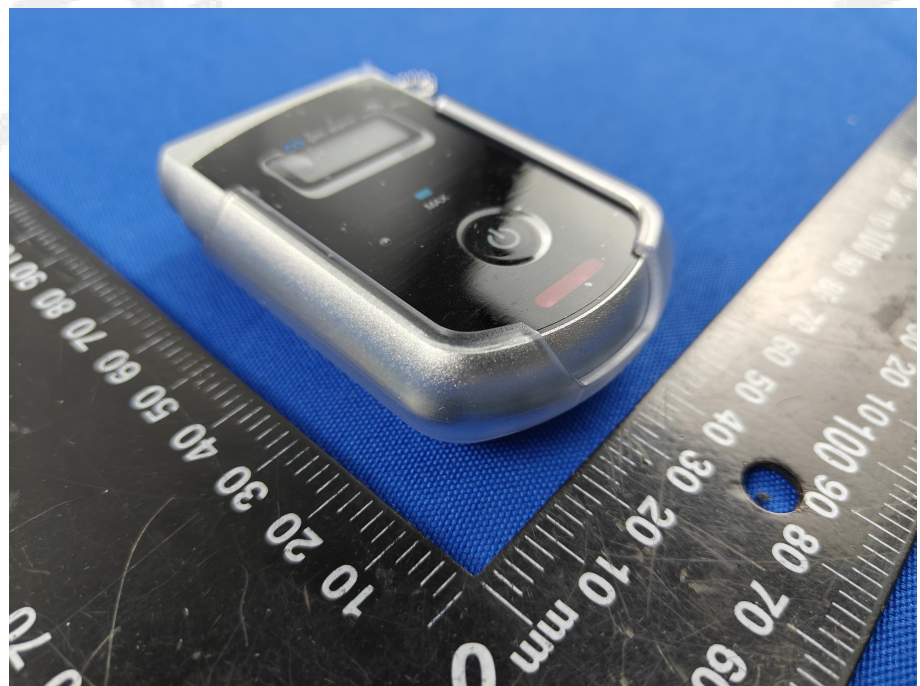
View:

- ☒ Overall
- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☐ internal
- ☐ _____

**Photo 2**

View:

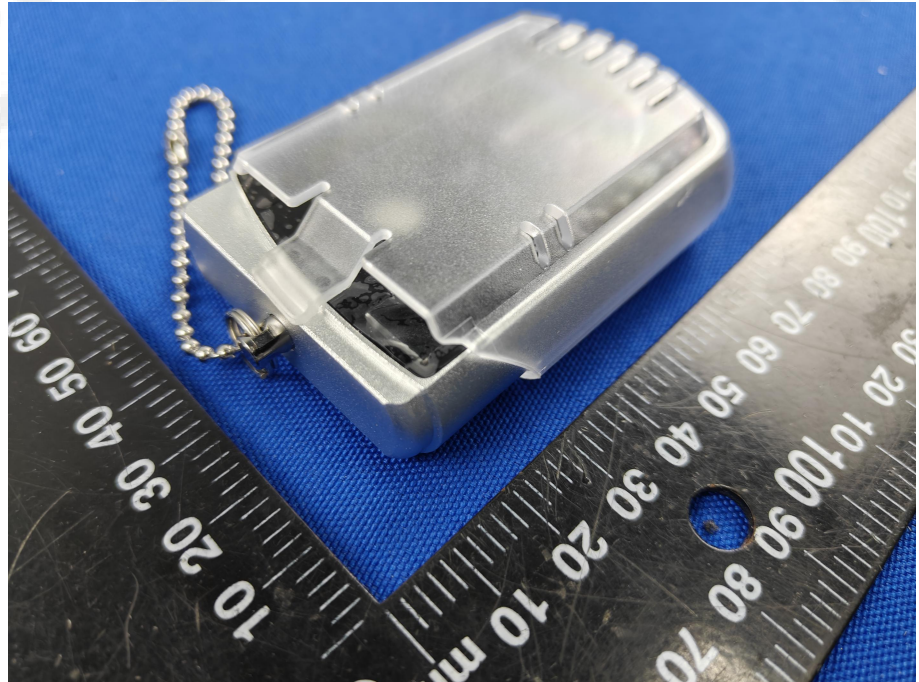
- ☐ Overall
- ☐ front
- ☐ rear
- ☒ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☐ internal
- ☐ _____



Attachment 2: Photo document**Photo 3**

View:

- ☐ Overall
☐ front
☐ rear
☐ right side
☒ left side
☐ top
☐ bottom
☐ internal
☒ _____

**Photo 4**

View:

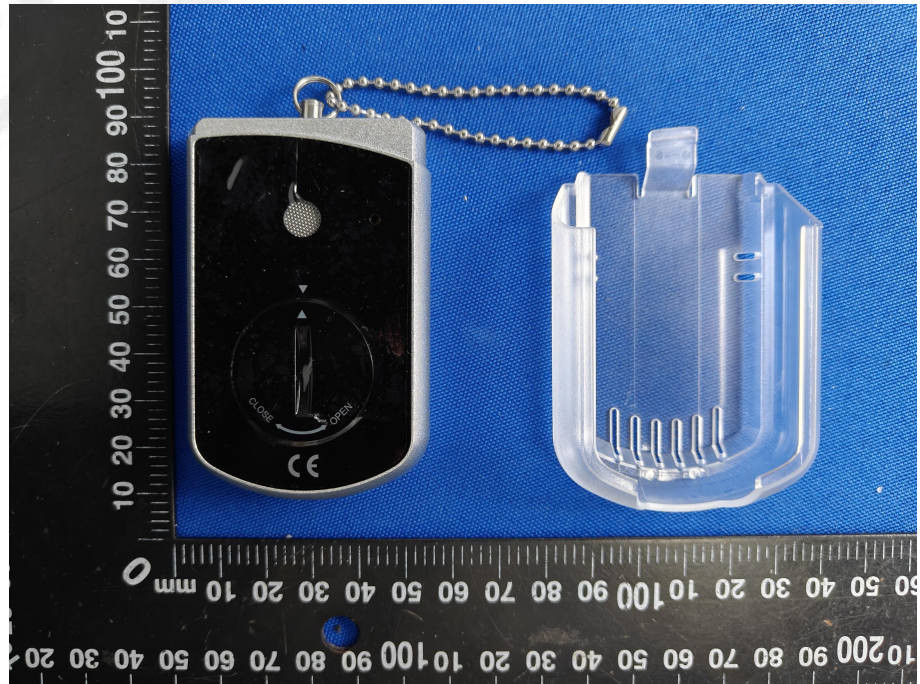
- ☐ Overall
☐ front
☒ rear
☐ right side
☐ left side
☐ top
☐ bottom
☒ internal
☐ _____



Attachment 2: Photo document**Photo 5**

View:

- ☐ Overall
☐ front
☐ rear
☐ right side
☐ left side
☐ top
☐ bottom
☒ internal
☐ _____

**Photo 6**

View:

- ☐ Overall
☐ front
☐ rear
☐ right side
☐ left side
☐ top
☐ bottom
☒ internal
☐ _____



Attachment 2: Photo document

Photo 7

View:

☐ Overall

☐ front

☐ rear

☐ right side

☐ left side

☐ top

☐ bottom

☐ internal

☒ Button battery

End of report