

User Manual

Models : ZKZ002

ZKZ002A

ZKZ002-903

ZKZ002A-903

■ Revision history

Rev.	Date	Points modified	Changes description
00	11.Apr.2025		First Release

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1. Overview

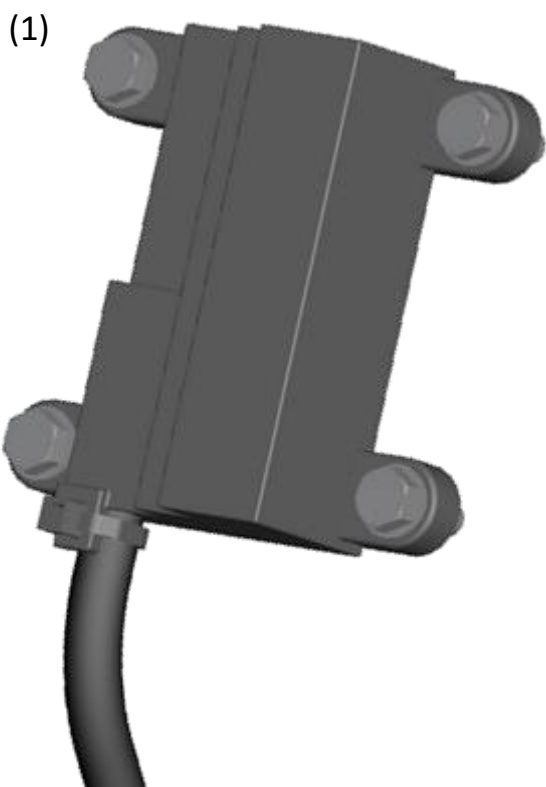
This product is a drowning detection unit. It is installed on a three-seater jet ski and outputs a warning if the two passengers in the back seat drown.

The system is composed of:

- The Control unit (1), which provides the following functions:
 - It communicates once per second with the smart key (2) carried by the passenger in the back seat, and if communication is lost, it determines that the passenger is drowning and issues a warning.
 - Up to two smart keys can be registered.
- The Smart key (2), which carried by passengers in the back seat.

The system combines the LF: Low Frequency and the RF: Radio Frequency to detect when rear seat passengers is drowning.

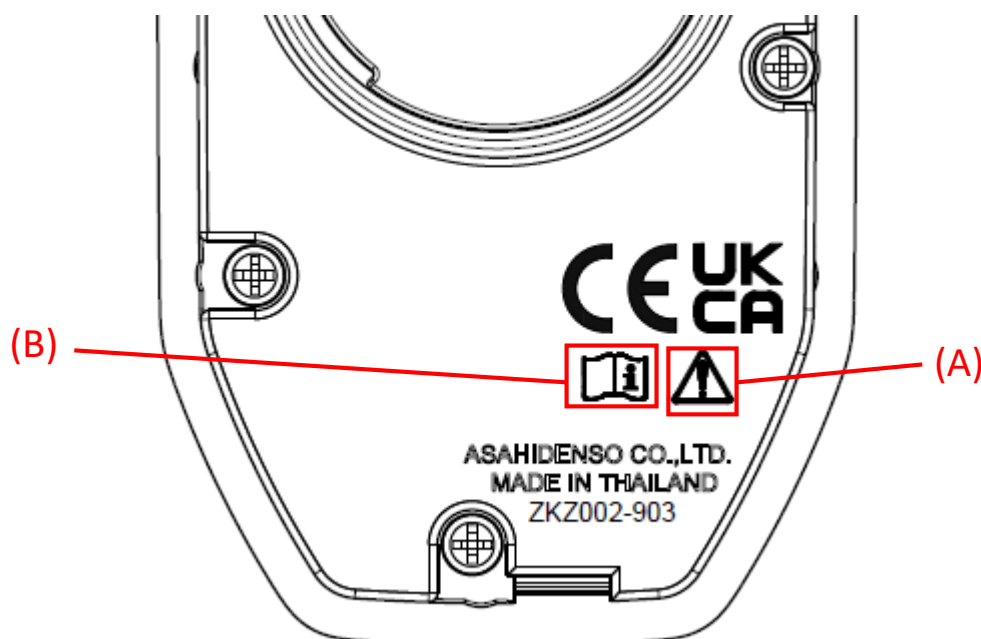
The system is integrated in CAN bus for all data transfer with the other electronic units on the jet ski.



1.1. Drowning detection

The control unit begins communicating with the registered Smart Key once power is supplied and the vehicle is started. If there is no response from the smart key, the control unit will assume that a passenger has drowning and will output a warning.

1.2. Replacing the battery in the Smart Key



[Important]

Take special care (A) when removing the key battery.

This symbol (B) warns the user about important use and maintenance instructions contained inside the documents provided with the equipment.



[Warnings / Caution]

Risk of battery leakage, heat generation, and explosion

- Do not expose the key to high temperatures, such as on the dashboard, and under direct sunlight.
- Do not mechanically crush or cut the key.

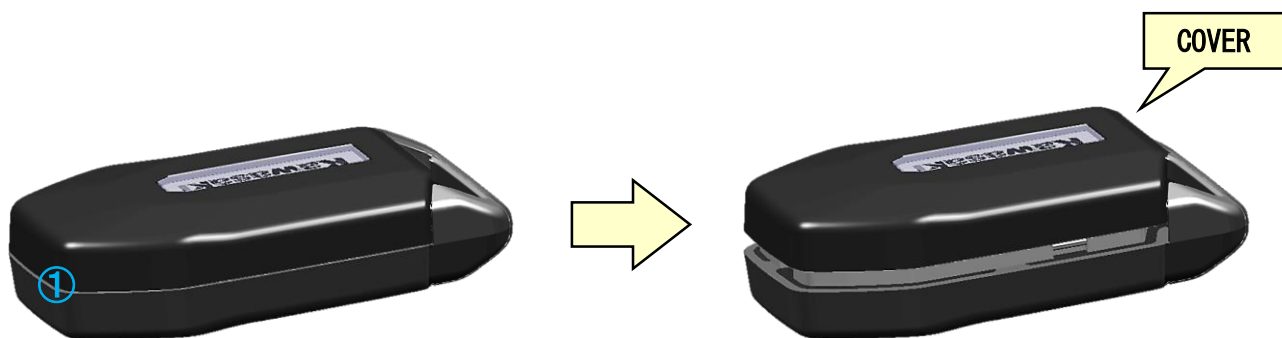
Risk of explosion if the battery is replaced by an incorrect type

- Always use only the same or an equivalent type of CR2032 3.0 [V] coin batteries.

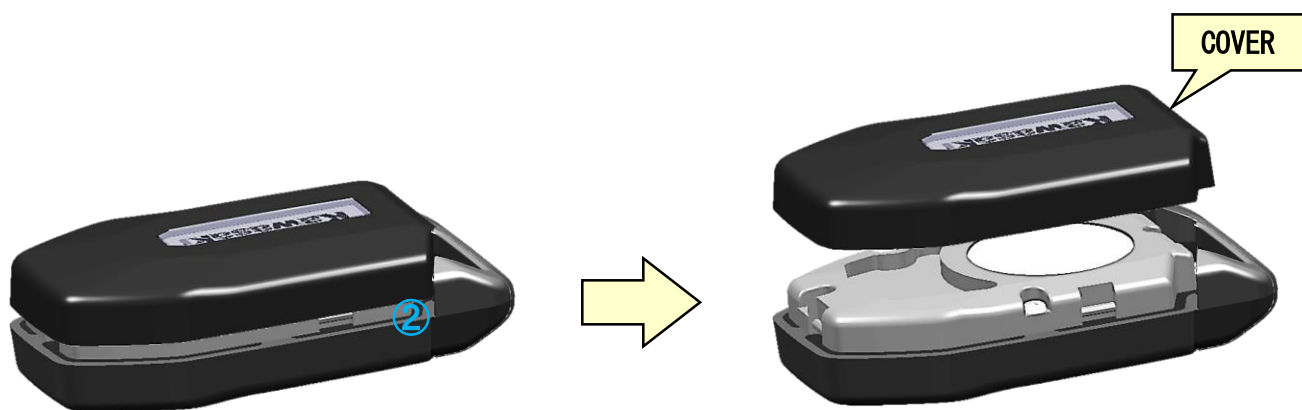
Do not include a coin battery in your mouth. There is a risk of burns from chemical substances.

- This product contains a coin battery.
- If coin batteries are accidentally ingested, chemical burns, penetration of mucosal tissue, etc. or in the worst case, death may result in just 2 hours.
- Keep new and used batteries away from children.
- If the battery cover does not close securely, stop using the product and keep it away from children.
- If you suspect that a battery is might have been swallowed or placed inside any part of the body, seek immediate medical attention.

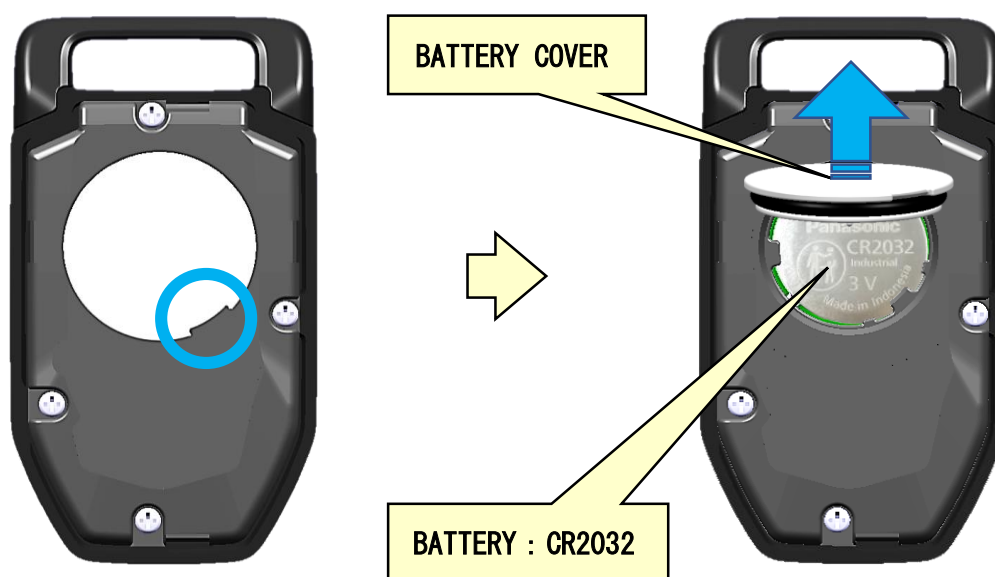
(1) Insert your fingernail into the gap shown in the figure below ① and pry open the cover to remove it.



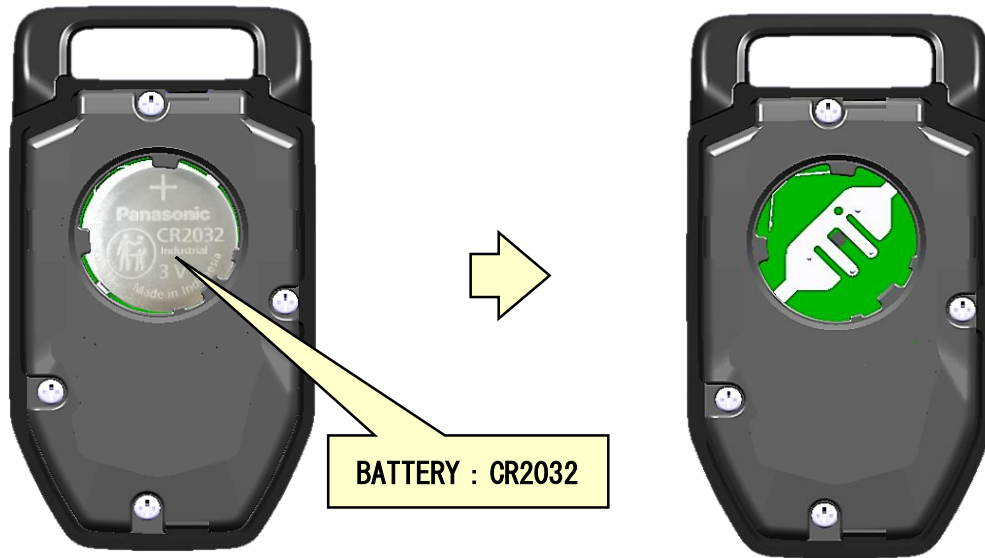
(2) Insert your fingernail into the gap shown in the figure below ② and pry open the cover to remove it.



(3) Hook your fingernail into the round frame in below figure and pull up to remove the battery cover.



(4) Remove the battery.



2. Installation notes

2.1. drowning detection unit attachment

Drowning detection unit consists of Control unit, Smart key.
These are attached to a jet ski by factory/field personnel.

2.2. Access to Smart key internal parts

It is strictly forbidden to have access to the inner electrical components, except used battery to be replaced.

2.3. Product modifications

It is strictly forbidden to modify or tamper products included in the Drowning detection unit including the Antenna Unit.

2.4. If the product fails

All damaged components, must be replaced.

2.5. Information of Battery

Information on the battery is given below.

1. Intended use of the battery

Power source for the smart key to communicate with the jet ski side.

2. Restrictions on hazardous substances

The content of hazardous substances used in the battery meets the following:

- Mercury : 0.0005wt% or less
- Cadmium : 0.002wt% or less
- Lead : 0.01wt% or less

3. Certification

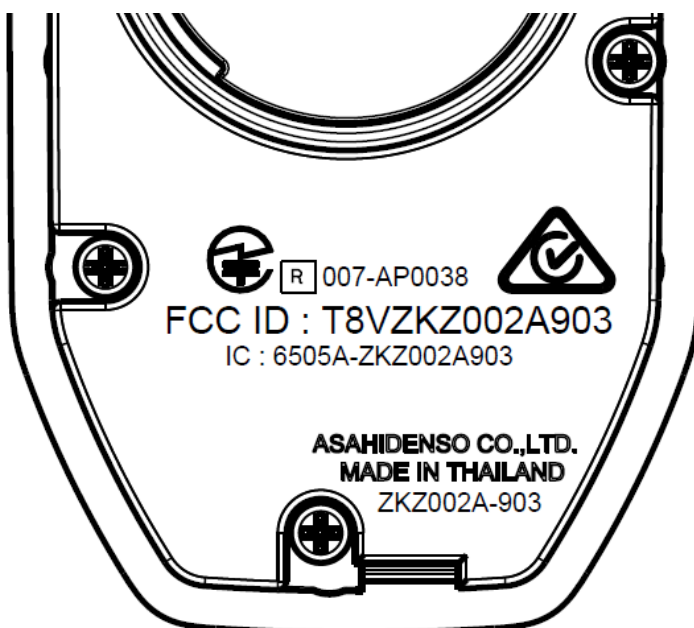
3.1. Manufacturer

Company Name	ASAHI DENSO CO., LTD.
Address	6-2-1 Somejidai, Hamana-ku, Hamamatsu, Shizuoka 434-0046, Japan
Website	http://www.ad-asahidenso.co.jp

3.2. Approval of each country

The certification number of Smart key is displayed when the cover is opened.

Smart key の認可番号はカバーを開けると表示されています。



3.2.1 FCC(USA) certification

Product name	Control unit	Smart key
FCC ID	T8VZKZ002A	T8VZKZ002A903

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines as this equipment has very low levels of RF energy.

3.2.2 ISED(Canada) certification

Product name	Control unit	Smart key
IC	6505A-ZKZ002A	6505A-ZKZ002A903

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

- 1. This device may not cause interference.**
- 2. This device must accept any interference, including interference that may cause undesired operation of the device.**

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1. L'appareil ne doit pas produire de brouillage;**
- 2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.**

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This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment must be installed and operated keeping the radiator at least 10cm or more away from person's body.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISDE. Cet équipement doit être installé et utilisé en gardant une distance de 10 cm ou plus entre le radiateur et le corps humain.

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This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules as this equipment has very low levels of RF energy.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISDE puisque cet appareil a une niveau tres bas d'energie RF.

3.2.3 Thailand certification

เครื่องโทรคมนาคมและอุปกรณ์นี้ มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.

3.2.4 Brazil certification

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados

ANATEL website:

Para majors Informação, consulte, visite o site da ANATEL.

www.gov.br/anatel/pt-br

3.2.5 China precautions for use

- 不得擅自改变使用场景或使用条件、扩大发射频率范围、加大发射功率（包括额外加装射频功率放大器），不得擅自更改发射天线；
- 不得对其他合法的无线电台（站）产生有害干扰，也不得提出免受有害干扰保护；
- 应当承受辐射射频能量的工业、科学及医疗（ISM）应用设备的干扰或其他合法的无线电台（站）干扰；
- 如对其他合法的无线电台（站）产生有害干扰时，应立即停止使用，并采取措施消除干扰后方可继续使用；
- 在航空器内和依据法律法规、国家有关规定、标准划设的射电天文台、气象雷达站、卫星地球站（含测控、测距、接收、导航站）等军民用无线电台（站）、机场等的电磁环境保护区域内使用微功率设备，应当遵守电磁环境保护及相关行业主管部门的规定；
- 禁止在以机场跑道中心点为圆心、半径 5000 米的区域内使用各类模型遥控器；