

U SAFE®
Technical
Specifications





# **U SAFE**

The U SAFE® system is an auto propelled, remote controlled water craft designed to be a fast-and precise "aquatic robot" that can reach a person quickly. It has a U-shaped hull with two electric turbines, one on each leg of the hull. The turbines are designed so that the device operates regardless of which side is up when thrown into the water.

The behaviour and controllability of the system is very effective because of its sophisticated navigation and guidance system. Operation is simple and intuitive, allowing first-time users the immediate ability to reach a person. The U SAFE® buoy is compact at approximately 80 cm by 100 cm, it weighs 13,70 Kg, is propelled by two electric turbines with power supplied by a Lithium-ion battery package.

Unlike convential buoys and devices, the U SAFE® system is not passive, allowing it to be driven to any person with high accurancy. Its mobility and controllability allow first responders to operate in all conditions including rough sea states and operate in close proximity to rocky areas. The U SAFE® system allows first responders to operate without endangering themselves or their vessels.

U-SAFE





## Charcteristics

# The future of lifesaving is here



- Remote controllable
- 7,5km/h (15 Km/h) cruise speed to enable a fast arrival to the person in need
- 2 motors that operate independently to enable fast and easy directional changes
- Latest generation battery technology to enable several rescue operations due its lengthy autonomy
- Possibility to operate from stand by mode after several months
- Flashing LEDs showing information to monitor major buoy data and assist night rescues
- Warterproof buoyant remote-control in case of dropping in water
- Immediate Buoy start up after by period







#### **Performance**

#### Performance Characteristics

Range Line of sight

@ Sea level - +/- 300mts

@ 10 mts above sea level - +/- 500mts

Endurance 3.20 nmi - buoy only\*

Speed Max - 15 Km/h

Cruise - 7.5 Km/h

Note: Performance values have been determined for a standard scenario (flat water, no wind).

Environmental conditions of a varying scenarios will influence these values.



#### **Physical Characteristics**

13.70 Kg Total weight

Endurance 3.20 nmi - buoy only\*

Speed Max - 15 Km/h

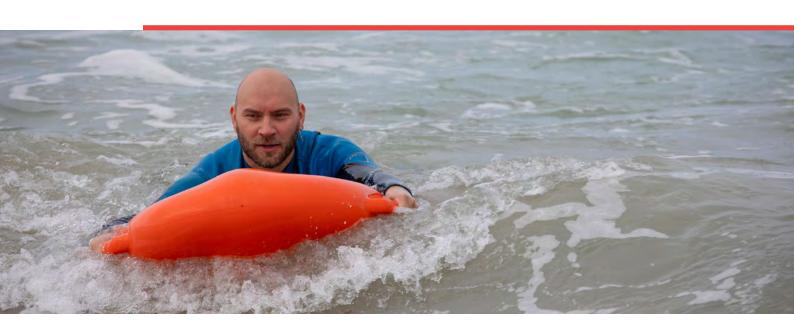
Cruise – 7.5 Km/h

#### **Environmental conditions**

Working temperature -20°C to +50°C

Warehousing temperature -20°C to +45 °C

Relative Humidity 0% to 80% (without condensation) Battery





## **Buoy** continued.



#### Radio Communication

Frequency 2.4 GHz

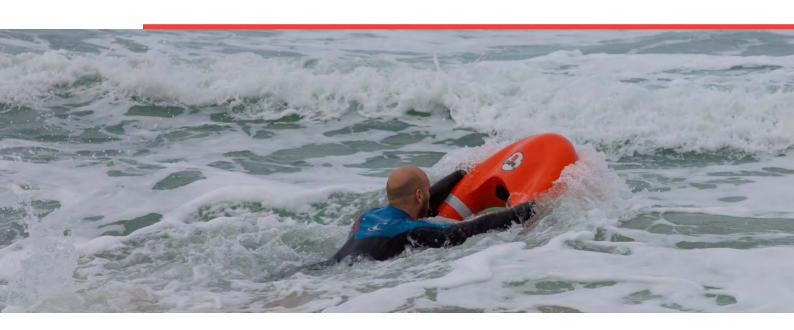
#### Motors

Impulse 2 x 90 N



#### Battery

Technology	Lithium ion
Capacity	580 W/h
Balancing	Yes
Temperature control	Yes
Connectivity	Bluetooth 4.2 Wi-Fi
Weight	3.8 Kg
Stand-by energy consumption	10% monthly total charge
Charging Time (induction)	15 hours (from 20%)
Capacity after 500 cycles	>70% of initial capacity





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### **Remote-Control**

#### **Physical Characteristics**

Total weight 216.1g

Dimensions (A x L x P) (mm) 167mm x 54mm x 53mm

Floats Yes

User Interface myusafe.noras.pt

Connectivity Bluetooth 4.2 Wi-Fi



#### **Battery**

Technology Lithium ion

Capacity 11.1 W/h

Nominal Voltage 3.6 V

Weight 46 g

Charging Time (induction) 4 hours

Autonomy 5 hours

Stand-by energy 20 µA (74µW)

0.5 % monthly total charge

Capacity after 500 cycles >70% of initial capacity

#### Communication

2.4 GHz Yes







## Charger

#### **Physical Characteristics**

Dimensions (A x L x P) (mm) 91.97mm x 115mm x 129.81mm

Connectivity Bluetooth 4.2 Wi-Fi



#### **Environmental Conditions**

Working temperature -20° to +60°C

Warehousing temperature -20° to +45°C

Relative Humidity 10% to 80% (without condensation)



#### **Power Input**

Dc Volts 25,2 V

#### **Induction Charger**

Working Temperature -20°C to +60°C

Output Power 40 W







# **Power Supply**

#### **CA Adaptor**

Power	75.6 W
Dc Volts	25.2 V
Current	3A
Entry Tension	100 - 240 V AC - 50/60 Hz:2A Max.
Class	В









Please feel free to contact FRSA to discus the right solution for your business or workplace



admin@frsa.com.au www.frsa.com.au

Perth - 08 9270 6777 Adelaide - 08 8311 1160 Melbourne - 03 9535 3300 Sydney - 02 8059 6902 Brisbane - 07 3209 7422



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