divePRO SCUBA

Augmented-Reality Dive Computer

User Manual

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Warnings and Safety Instructions

WARNING — failure to read and follow these instructions could result in serious injury, drowning, or death.



DANGER

This device can calculate deco stop requirements. These calculations are at best a guess of the real physiological decompression requirements. Dives requiring staged decompression are substantially riskier than dives that stay well within no-stop limits.

Diving with mixed gases and/or performing staged decompression dives and/or diving in overhead environments greatly increases the risk associated with scuba diving.

YOU REALLY ARE RISKING YOUR LIFE WITH THIS ACTIVITY



WARNING

This device has bugs. Although we haven't found them all yet, they are there. It is certain that there are things that this device does that either we didn't think about or planned for it to do something different. Never risk your life on only one source of information. Use a second computer or tables. If you choose to make riskier dives, obtain the proper training and work up to them slowly to gain experience.

This device will fail. It is not whether it will fail but when it will fail. Do not depend on it. Always have a plan on how to handle failures. Automatic systems are no substitute for knowledge and training.

No technology will keep you alive. Knowledge, skill, and practiced procedures are your best defense (except for not doing the dive, of course).

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divePRO SCUBA can calculate decompression stop requirements. These calculations are, at best, an estimate of the real physiological decompression requirements of your body on a given day. Dives that require staged decompression are substantially riskier than dives that stay well within no-stop limits.

Diving with mixed gases, performing staged decompression dives, or diving in overhead environments greatly increases the risk associated with scuba diving.

You really are risking your life with this activity.

Critical diving safety — risk of drowning

- **Supplementary aid only.** divePRO SCUBA is a secondary support tool. Always carry a backup dive computer, a submersible pressure gauge (SPG), a depth gauge and a timing device. Do not rely on divePRO for survival.
- **Certifications.** This device is for use only by divers certified by a recognized training agency. Do not dive beyond the limits of your certification.
- **Distraction hazard (AR display).** The heads-up display may distract you from your surroundings. Maintain situational awareness of your depth, gas supply and dive buddy. Do not fixate on the AR.
- **Decompression sickness.** No algorithm can eliminate the risk of decompression sickness. Physiology varies by individual and by day. Dive conservatively and within no-decompression limits and always ascend slowly. Ascending faster than the recommended rate significantly increases the risk of decompression sickness and lung over-expansion injuries. The device's ascent-rate alarms are secondary aids; they do not guarantee your safety.
- **Not a medical device.** The health metrics reported by divePRO — including heart-rate tracking — are for recreational and informational purposes only. They are close estimates but may not be completely accurate. divePRO SCUBA is not intended to diagnose, monitor, treat, cure or prevent any disease. Consult a physician before beginning any dive training or exercise program.
- **Device failure.** If the AR goes blank unintentionally, freezes or fails at any point during a dive, abort the dive immediately and ascend safely using your backup instruments and standard dive tables.
- **Not for commercial use.** divePRO SCUBA is designed for recreational diving only. It is not intended for commercial, military or professional diving activities (for example commercial hull cleaning or daily professional instruction).
- **Firmware and software updates.** Keep the device on the latest firmware before every dive. divePRO periodically releases firmware updates that improve product stability, algorithm accuracy and safety. Failure to install available firmware before diving may result in device malfunction. divePRO is not liable for damages, injuries or software malfunctions that result directly from failure to install available firmware. Check the divePRO Cloud app for firmware updates before every dive.

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- **Oxygen toxicity.** Diving with oxygen partial pressures (PPO_2) above 1.4 atm is extremely dangerous and can lead to central nervous system (CNS) oxygen toxicity, seizures, drowning or death. Verify your gas mixture and the configured gas before every dive.

Device usage and physical impact

- **Do not jump face-down.** Never enter the water face-first while wearing the device. The impact can shatter the lens or frame and cause severe facial or eye injury. Hold the device firmly against your face with one hand when you enter the water.
- **Impact resistance.** The lens complies with the relevant safety standard but is not unbreakable. Avoid excessive stress or sharp impacts.
- **Barotrauma — device squeeze.** Failure to equalize the air pressure inside the device during descent can result in device squeeze, causing severe facial bruising, blood-vessel damage or eye injury. Exhale gently through your nose into the device to equalize as you descend.
- **Maximum depth rating.** Never exceed the device maximum certified depth (see specifications). Exceeding it may cause structural or electronic failure, implosion, severe injury or death.
- **Not intended for children.** Decompression models and algorithms are based on adult human physiology. They have not been clinically tested or validated for use by minors. Use of this device by anyone under the age of 18 is prohibited.
- **Never share your device between dives.** Sharing the device with another diver who has a different dive profile produces inaccurate decompression data and can lead to severe injury or death. Every diver must wear their own personal dive computer.
- **Service life.** The service life of the divePRO mask depends on its conditions of use, storage, care and maintenance. Exposure to sunlight, heat, salt water, chemicals, mechanical stress and other environmental conditions may cause materials and components to deteriorate over time.

  Before each dive, inspect the mask for signs of damage, deterioration or abnormal operation. Do not use the mask if any safety-critical component is damaged or deteriorated, if the mask does not fit or seal correctly, or if any function required for safe operation does not operate as expected.

  Properly maintained components may remain serviceable if they remain in safe operating condition and meet the inspection criteria described in this manual.

Battery and electronics safety

- **Lithium battery.** This device contains a lithium-polymer battery. Do not puncture, incinerate, disassemble, or expose the device to extreme heat (such as a hot car dashboard or direct sun). Damaging the battery may result in fire, explosion or leakage of hazardous chemicals.
- **Do not disassemble.** Do not attempt to remove the battery or open the sealed electronics module. Breaking the seal destroys water resistance and voids the warranty immediately.
- **Charging.** Ensure the charging area is completely dry and free of salt or debris before connecting the cable. Charging a wet device can cause electrical shorts, fire or permanent destruction of the device, none of which is covered under warranty.

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- **Interference with medical devices.** divePRO SCUBA emits BLE and NB-IoT radio frequencies which may interfere with pacemakers or other implanted medical devices. Consult your physician before use.

Stop using the product if any of the following occur:

- Damage to safety-critical parts that cannot be replaced (silicone frame, glass, sensors — cracks, cuts, missing pieces).
- Material deterioration from prolonged sunlight exposure or heavy bending.
- The product no longer appears safe or reliable.
- The product no longer meets applicable technical standards (for example due to regulatory change or incompatibility with other products).
- The product's history of use is unknown (for example a second-hand unit).
- The device malfunctioned during a dive. Do not dive with it again until the problem is resolved. Report the problem to divePRO.

Medical and health Warnings

- **Not a medical device.** The vital signs monitor and tissue-saturation data are estimates for recreational use only. They are not medical diagnostics. Consult a physician before beginning any diving program, especially if you have a pacemaker or other implanted electronic device.
- **Epilepsy warning.** The AR display can include flashing cues. If you have photosensitive epilepsy, consult a doctor before using it.
- **Skin irritation and allergies.** Prolonged contact with device materials (silicone, plastics, metals) may cause skin irritation or allergic reactions in susceptible individuals. If you develop a rash, redness or any skin discomfort, discontinue use and consult a physician. divePRO is not responsible for allergic reactions to standard manufacturing materials.
- **Flying after diving.** Flying too soon drastically increases the risk of decompression sickness. Always respect the no-fly time (NFT).

> **One additional reminder**
>
> Even perfectly followed instructions cannot remove risk from diving. Training, fitness, honest self-assessment and a good dive buddy are the primary safety systems. Your device is a tool; you are the diver.

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About this manual

This User Manual explains how to use your divePRO SCUBA device. It walks you through daily operation, charging, setup, connecting, the augmented reality display, the knock interface, dive modes, dive configurations, vital-signs monitoring, the divePRO Cloud app, and post-dive sync.

The first chapter of this manual titled “Warnings and Safety Instructions”, contains critical safety information. Read it in full before you use the device for the first time and re-read it whenever you change something about how you dive (new agency, new mixes, new depths, new conditions).

> **Warnings are part of operating the device**
> Every warning in the first chapter has been written after a real review of how divers actually use (and misuse) dive computers. Treat those pages as part of your pre-dive ritual.

In this User manual the following convections indicate the severity or purpose of the information that follows:

> **DANGER**
> Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

> **WARNING**
> Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

> **CAUTION**
> Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury or damage to the product.

> **INFO**
> Indicates important information, recommendations, or operating guidance that is not related to a safety hazard.

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Glossary

Term	Definition
AR display	Augmented-reality display
BLE	Bluetooth Low Energy
CNS	Central nervous system
DCS	Decompression sickness
GNSS	Global Navigation Satellite System
HR	Heart rate
HRV	Heart-rate variability
LED	Light-emitting diode
MAX	Maximum depth
NB-IoT	Narrowband Internet of Things
NDL	No-decompression limit
NFT	No-fly time
PPO_2	Oxygen partial pressure
RR	Respiratory rate
RRV	Respiratory-rate variability
SAT	Saturation
SBP / DBP	Systolic blood pressure / Diastolic blood pressure
SF	Surface time
SPG	Submersible pressure gauge
SpO_2	Peripheral oxygen saturation
TTS	Time to surface

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Part A: Know Your divePRO SCUBA

1 Intended use and limits

1.1 What divePRO SCUBA is

divePRO SCUBA is a diving device that combines four things in one product:

- A dive mask with a single lens and a soft silicone skirt.
- A dive computer that tracks your depth, dive time, no-decompression limit, ascent rate, safety stop and oxygen exposure (CNS), and guides you through decompression stops if a dive goes beyond its limits. Incorporates GNSS receiver to track the location of the dive.
- A vital-signs sensor that gives you estimates of your heart rate (HR), heart-rate variability (HRV), blood oxygen saturation (SpO_2), respiratory rate (RR), respiratory-rate variability (RRV), systolic blood pressure (SBP), diastolic blood pressure (DBP) and calories while you dive.
- An AR display that projects these readings onto the lens in front of your eye.

The device has no buttons. You operate it by knocking the frame. All settings are made in the divePRO Cloud app before the dive and are synchronized with the device.

> **INFO**
> This manual describes the device. The divePRO Cloud app has its own manual, which explains how to use the app.

> **INFO**
> divePRO SCUBA is designed for certified recreational SCUBA divers. Every feature described here assumes you have at least a current open-water certification and that you dive within the limits of your training and medical fitness.

1.2 Who it is for and what you need

divePRO SCUBA is for recreational divers. Everyone who uses it must:

- be at least 18 years old;
- be medically fit to dive. If you are unsure, consult a doctor before you dive;
- have a smartphone with the divePRO Cloud app, to set up the device and change its settings.

For scuba diving you must also:

- hold a current scuba certification from a recognized training agency (for example PADI, SSI, BSAC or NAUI), and dive within the limits of that training;
- carry a backup depth and time instrument, for example a second dive computer, and a submersible pressure gauge on every dive;
- dive with a buddy.

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WARNING

The device is a supplementary aid. Do not rely on it alone to keep you safe. Always carry a backup instrument and dive within your training.

1.3 Recreational limits and the 40 m statement

The dive-computer functions of divePRO SCUBA are intended for recreational diving to a maximum depth of 40 m (130 ft).

WARNING

The device continues to operate at depths below 40 m (130 ft). The device is intended for recreational diving to a maximum depth of 40 m (130 ft), and divePRO makes no warranty or representation as to the accuracy, reliability or suitability of any indication displayed below that depth. Any use of the device below 40 m is entirely at the diver's own risk, and divePRO shall not be liable for any injury, loss or damage arising from such use.

Your own limits can be tighter than 40 m:

- Your certification may allow a shallower depth. In the app you select your certificate, and the maximum depth changes to the depth your certificate allows by default. You can also set a custom depth. A custom depth shallower than your certificate depth is accepted. A custom depth deeper than your certificate depth causes a warning on the divePRO Cloud app. The device also warns you when you pass the maximum depth that is set.
- You must stay within your no-decompression limit. The device displays it on the AR display.
- You must use only the gases you are trained for. The device supports air and nitrox up to 50 % oxygen (O_2).

WARNING

The device continuing to work below 40 m does not make deeper diving safe. Diving beyond your training and beyond 40 m can cause serious injury or death.

Operating temperature. Use the device only at temperatures from 0 °C to 40 °C (32 °F to 104 °F).

1.4 What the device is not

- It is not a medical device. Vital-sign readings are estimates for Information only. They do not diagnose, measure, treat or prevent any condition, and you must not base dive decisions on them.
- It is not for planned decompression diving; decompression guidance is only an emergency fallback
- It is not for rebreathers, gas mixtures other than air and nitrox up to 50 % O_2, or switching gas during a dive.
- It is not for commercial, military or professional diving.
- It is not a replacement for training, a backup instrument or a buddy.
- It is not for anyone under the age of 18.

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- It is not to be shared. The decompression data belongs to one diver. Another diver wearing your device may get wrong Information. Each diver must use their own device.

1.5 What happens beyond the limits

divePRO SCUBA is built so that it keeps guiding you even when a dive goes beyond recreational limits.

Deeper than 40 m: the MAX depth value and warning icon blink.

The device always shows what you need to do to avoid decompression sickness. Whether you can do it depends on your gas and your condition, and the decision is yours.

This is a safety net for the unexpected. It is not a way to plan dives. Never plan a dive that needs decompression stops. Section 8.7 describes this behavior in detail, and chapter 11 lists every alarm.

> **WARNING**
> The device does not measure how much gas you have left. Any of the stop instructions cannot take your remaining gas into account. If you cannot follow an instruction, ascend and follow your emergency procedures, and get medical help if you have symptoms of decompression sickness.

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2 Box contents and anatomy

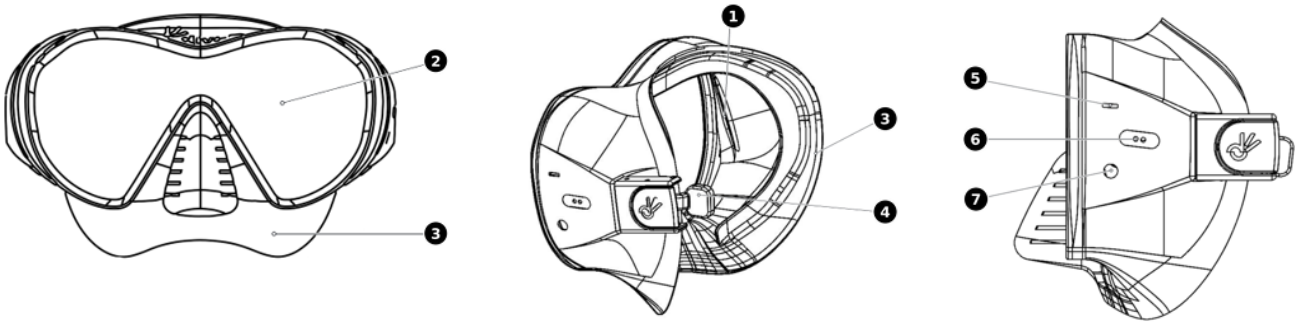
2.1 What is in the box

Your divePRO SCUBA comes in a protective carrying case. The case contains:

- the divePRO SCUBA device
- a magnetic charging cable (USB-C)
- a neoprene strap cover
- a divePRO limited edition sticker
- the Quick-Start Guide
- the Safety & Regulation Information

Read the Safety & Regulation Information before you use the device for the first time. Use the carrying case to store and carry the device

2.2 External features and integrated systems



Front view Inside view Side view

Figure 1 Front, inside and side views of the device

No.	Part
1	AR display
2	Lens, Tempered Glass
3	Skirt (high-quality soft liquid silicone)
4	Vitals Sensor
5	LED Indicator
6	Charging Contacts
7	Depth Sensor

Table 1 Numbered parts of the device

The electronics are built into the frame. You cannot see a screen, a button or a compartment. The numbers below are the numbers in Figure 1.

1. **AR display:** projects your readings onto the lens in front of your eye.

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2. **Lens:** a single lens made of tempered glass with UV filter.
3. **Skirt:** made of high-quality soft liquid silicone. It seals against your face.
4. **Vitals sensor:** an optical sensor that rests against your left temple when you wear the device. It monitors your vital signs (Chapter 9).
5. **LED indicator:** on the outer surface of the device. It shows status, hardware errors and alarms. You cannot see it while you wear the device.
6. **Charging contacts:** connect the magnetic charging cable to the device.
7. **Depth sensor:** measures the water depth.

Inside the device there are also:

- A digital compass and motion sensors.
- A GNSS receiver that records where you enter and leave the water.
- An NB-IoT modem.
- Luminosity Sensor measures the ambient and adjusts the AR display brightness.
- BLE wireless, which connects the device to your smartphone.
- Pressure sensor, that measures the equalization of the device located on the inner left side of the device.
- Temperature sensors, measuring water temperature and breath temperature.
- A sealed, rechargeable lithium battery.

> **INFO**
> The device has no buttons. You control it by knocking the frame and through the divePRO Cloud app.

> **CAUTION**
> Do not open the sealed electronics or try to remove the battery. Doing so destroys the water seal and voids the warranty.

2.3 Serial number

Every device has a unique serial number. It is stored in the device nonvolatile memory and is not printed on the device. You can see it only in the divePRO Cloud app. After you connecting the device, the app shows the serial number. Keep the number for support requests and warranty claims.

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3 Fit, donning, defogging and equalizing

3.1 Putting the device on

Put the device on at the surface, as you would any dive device.

1. Put the device on your face.



Figure 2 Put the device on your face

2. Pull the strap over the back of your head.



Figure 3 Pull the strap over your head

3. Adjust the strap until the device is comfortable and the skirt seals against your face. Do not try to see the display while you do this.

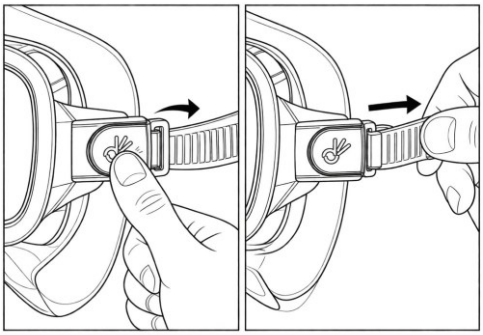


Figure 4 Loosen or tighten the strap

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4. Make sure the vitals sensor touches clear skin, without hair, at your left temple.

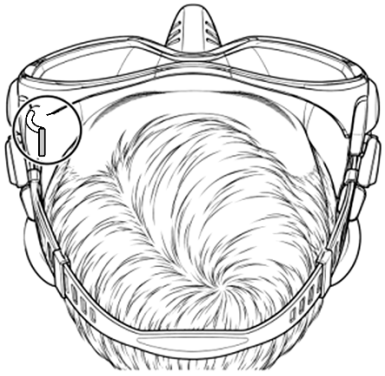


Figure 5 Sensor on clear skin at the left temple (view from above)

5. Switch the device on. Knock the frame three times (see Chapter 6).



Figure 6 Switch the device on: knock three times

6. The first time you wear the device, check the display and adjust its position in the divePRO Cloud app.

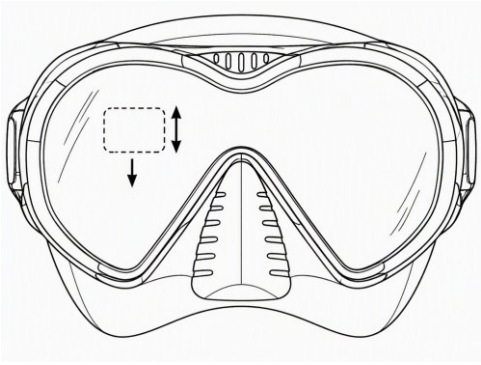


Figure 7 Set the display position in the app

INFO

Fit the device on your face as if you would like any device. Do not move or adjust the device to see the display. Adjust the display position in the divePRO Cloud app after the device fits.

WARNING

Do not dive with a device that leaks. Make sure the skirt seals against your face. Do not over-tighten the strap. A device that is too tight is uncomfortable and can leave pressure marks.

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Adjusting the strap. To loosen it, press the divePRO logo on the buckle or pull the edge of the buckle. To tighten it, pull the edge of the strap.

Vitals sensor. The sensor needs no action from you. It must gently touch clear skin, without hair. Make sure the sensor and your skin touch. If you wear a hood, ensure that the sensor is under or in front of the hood touching the skin.

Switching the device on. When the device switches on, the start-up screen appears on the AR display and the LED of the device turns solid blue.

Setting the display position. Verify that you can see all edges of the display. If you cannot, use the divePRO Cloud app to adjust the display position (see Chapter 7.13).

> **INFO**
> The optimal position of the display may be different underwater. After your first dive, adjust the position again if required.

3.2 First-use lens preparation and anti-fog

divePRO treats the device lens before it is shipped.

Before the first use:

1. If you have touched the internal lens of the mask with your hands or if it is dirty from use, clean it thoroughly with a mild alcoholic solution or soap and let it completely dry. The divePRO antifog spray needs a clean surface for optimum performance.
2. Apply the divePRO anti-frog spray to cover both the left and the right part of the lens as well as the AR projector lens evenly and let it dry completely. Make sure droplets of antifog solution are not formed on the AR projector lens.
3. You don't need to rinse with water before wearing your mask and dive.
4. You can rinse with water once or twice before you need to re-apply the antifog spray solution following steps 1 and 2.

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> **INFO**
> Fog affects how well you can see the AR display. Use the anti-fog solution carefully, so that the lens and the AR display stay fog-free.

> **CAUTION**
> Never use abrasive agents, toothpaste, heater or other mechanical means on the device. They can damage the device or scratch the glass. Never use mechanical means on the outer side of the glass. This damages the coating.

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CAUTION

The device contains electronics and sensors. Apart from the anti-fog solution, do not apply chemicals that can damage silicone or electronics. Clean the device with tap water only or, occasionally, with mild soap, as you would any other dive device.

3.3 Water entry

- Switch the device on before you enter the water. Knock the frame three times (see Chapter 6).
- Hold the device in place with your hand so that it does not come off.
- When entering the water from a boat, enter the water on your back (back roll) or with a giant stride.

WARNING

Do not enter the water face first. The impact on the water can break the glass.

INFO

Switch the device on before you enter the water. The device also switches on when you reach a depth of about 1 m (3 ft), but with a short delay. In this case the device does not record your entry position, because it was not switched on at the surface.

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3.4 Equalizing

As you descend, the water pressure presses the device against your face. Equalize the pressure in the device by gently exhaling through your nose. For the equalization indicator, see Chapter 7.8.

3.5 After the dive

After the dive:

- Synchronize the device with the divePRO Cloud app and then switch the device off through the app
- Rinse the device with fresh water after every dive. Occasionally, wash it with mild soap to prevent salt build-up (see the care chapter).
- Let the device dry.
- Store the device in the carrying case. This is a good way to protect it.

INFO

If the device is idle for 25 minutes, it switches off automatically.

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4 Battery, charging and power states

divePRO SCUBA has a sealed, rechargeable lithium battery built into the frame. You cannot replace the battery yourself. This chapter explains how to charge the device, what the LED and the AR display tell you about the battery, and how the device switches on and off.

4.1 Charging

The device charges through its magnetic charging cable. The cable connects to the charging port on the left side of the device.

1. After the dive, rinse the device with fresh water and let it completely dry. Make sure the charging contacts are completely dry and free of salt and debris.
2. Bring the magnetic connector of the cable to the charging contacts. The magnets center the connector and connect by themselves.
3. Plug the USB-C end of the cable into a 5V USB power source.
4. Check that the LED glows green and breathes slowly (see section 4.2).
5. Wait until the LED is solid green. A full charge from empty takes about 90 minutes. Then disconnect the cable.

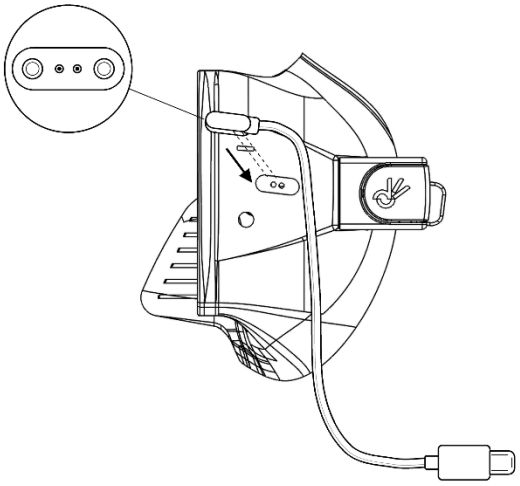


Figure 8 Charging the device

INFO

A USB power adapter is not included. Use a 5V USB power source, 0.3A minimum.

INFO

It is good practice to charge the device before every day of diving. A full battery at the start of the day is the easiest safety margin you can give yourself.

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CAUTION

Do not charge the device when the charging contacts are wet or covered with salt or debris. Moisture on the contacts can damage the device.

Charge the device at temperatures from 18 °C to 40 °C (32 °F to 104 °F).

4.2 LED states

The status LED is on the outer surface of the device. You cannot see it while you wear the device. It shows status and hardware errors and alarms. Everything you need to know while wearing the device, such as a low battery or a start-up error, also appears on the AR display.

Situation	LED	AR display	Meaning and action
Device off, triple knock, battery empty	3 red blinks	Battery-low graphic, briefly	Charge the device before use.
Device off, triple knock, battery in deep discharge	Nothing	Nothing	Place the charger and wait a couple of minutes for the charging LED to start glowing Green.
Device on, Charger connected, charging	Green, breathing (slow on and off)	Charging battery icon	Charging is in progress.
Device off, Charger connected, charging	Green, breathing (slow on and off)	Nothing	Charging is in progress.
Device on, Charging complete	Solid green	Full Battery icon	The LED stays green until the charger is disconnected.
Device off, Charging complete	Solid green	Nothing	The LED stays green until the charger is disconnected.
Device on, Charging, Charger fault	Solid red	Current battery level	When the device is charging and if a charge fault condition occurs the red LED turns on. Check that the charger sits correctly on the contacts and that it has power. The LED turns green again when the charge fault condition is resolved.

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Situation	LED	AR display	Meaning and action
Device off, Charging Charger fault	Solid red	Nothing	When the device is charging and if a charge fault condition occurs the red LED turns on. Check that the charger sits correctly on the contacts and that it has power. The LED turns green again when the charge fault condition is resolved.
Device on, normal operation	Solid blue (always on)	AR table	Start-up was successful. BLE wireless is on at the surface and off during a dive. The LED stays blue.
Error during start-up	Solid orange	Error code	Note the code and report it to divePRO (see chapters 11.4 and 16.2).
Alarm during dive	Blinking orange	Blinking Alarm parameter and warning icon	See chapter for alarms 11.2
You select your device in the app	Magenta blinks 6 times	AR table	This identifies your device when several are nearby (the app lists only MAC addresses). Then connect.

Table 2 LED and battery states

4.3 Battery indicator on the AR display

The AR display shows a battery icon with four segments. Each segment stands for about 25 % of the battery capacity. When the last segment starts to blink, less than 10 % of the capacity remains. The battery percentage is shown in the divePRO Cloud app.



Figure 9 Battery icon

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4.4 Runtime

The runtime depends on the state of the device. The values below are for a fully charged battery at 20°C temperature.

State	Runtime
Off (very low power)	Up to 45 days
On at the surface	The device switches off by itself after being idle for 25 minutes.
Dive	About 10 hours of continuous dive time per charge (Low temperature may reduce battery capacity)

Table 3 Runtime of the device

> **INFO**
> Cold water reduces the battery performance. Charge the device fully before a dive.

4.5 Power states and waking the device

The device has two power states.

- **Off (very low power).** The AR display is off.
- **On (normal power).** The device shows the AR table and the LED is solid blue. BLE wireless and NB-IoT / GNSS are ON at the surface. During a dive, BLE wireless and NB-IoT / GNSS are switched off.

Switching on. At the surface, knock the frame on the left side three times (see Chapter 6). If the battery is empty, the device does not switch on: the LED blinks red three times and the AR display shows the battery-low graphic briefly. If the battery is completely drained, see Deep discharge.

Switching off. After the dive, you can synchronize the device with the divePRO Cloud app and then switch the device off, via the app. While not in dive mode, If the device remains idle for 25 minutes, it switches off automatically.

Forgot to switch on? We recommend that you switch the device on before the dive. If you forget, the device switches on when you reach a depth of about 1 m (3 ft), after a short delay (max 30 sec). In this case the device does not record your entry position, because it was not switched on at the surface.

Deep discharge. If the battery is depleted, the device does not respond. Place the charger and wait for the green charging LED.

4.6 Low battery behavior

> **WARNING**
> Do not start a dive with the low-battery warning active. The device may switch off during the dive. Charge the device before you enter the water.

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> **INFO**
> When only one segment of the battery icon is left, it is best not to start a dive, even if the charge may be enough. You can view the exact battery percentage in the divePRO Cloud app.

During a dive. When the last segment of the battery icon starts to flash, less than 10 % of the battery capacity remains. End the dive and begin your ascent.

If the device switches off. Ascend using your backup depth and time instrument.

> **WARNING**
> Never trust your life solely to your dive computer, always have a redundant device, trust your training and listen to your body.

4.7 Battery safety

- The battery is sealed and cannot be replaced by the user. Do not open the device or try to remove the battery.
- Do not puncture, burn or take apart the device. Do not expose it to extreme heat, such as a hot car or direct sunlight. A damaged battery can cause fire, explosion or leakage of hazardous chemicals.
- Store the device in the carrying case in a cool, dry place, out of direct sunlight.
- Disposal of the battery: see Batteries, Disposal and Recycling in chapter 16.3.

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5 Getting ready

This chapter tells you what to do before your first dive.

5.1 Before your first dive

Before your first dive, set up the app, connect the device, update to the latest available firmware and check your settings. Figure 10 shows the order. The following table lists what to do in the divePRO Cloud app and why.



Figure 10 Getting ready: from the box to the first dive

Step	What you do	Why it matters
Install the app	Install the divePRO Cloud app on your smartphone from the App Store or Google Play. Allow the app to use BLE wireless and Location while you use it.	All settings are made in the app. The device has no buttons.
Create your account	Sign in with a one-time code that is sent to your email, or with your Google or Apple account.	There is no password. Your settings and dive history are stored in your account, so you can change phones.
Complete your profile	At the app settings, Enter your height, weight, gender and date of birth.	This Information is used for calculating the calories consumed during the dive as well as other analytics on the divePRO platform.
Add your certification	At the app settings, If you scuba dive, you can add your certificate. It is an important step for your default settings, but the app does not enforce it.	The maximum depth is not selected automatically. When you select your certificate, the maximum depth changes to the depth of your certificate. You can also set a custom depth. The default is 18 m (60 ft).
Connect the device	Connect the device to the app (see section 5.2).	Settings, firmware updates and dive data are transferred between the device and the app.

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Step	What you do	Why it matters
Update the firmware	Update the firmware to the latest available (see section 5.3).	If a device firmware update is available, a mandatory popup screen will show, guiding you through the necessary steps you need to follow to perform the update. Updates improve stability and safety of the device and add new features.
Personalize	Choose your units, display position and brightness, rolling screens, knock functions and dive settings.	In order to get the best user experience, it's recommended to personalize your settings before your first dive. Chapter 13 lists every setting.

Table 4 Getting ready: what to do in the app

INFO

You need an internet connection to create your account, to download firmware updates and to store your dive data in the cloud.

5.2 BLE Connection in short

1. Charge the device. At the surface, switch it on by knocking the frame three times. The start-up screen appears and the LED turns solid blue.
2. Open the divePRO Cloud app on your phone and start the connection. The app searches for devices that are not connected to the app at that moment. Keep the phone close to the device.
3. Select your device in the app. If several active devices are nearby, the app shows only MAC addresses. When you select a device, its LED blinks magenta six times. Hold the device in your hand so that you can see the LED. After the connecting, the app shows your device as connected, together with its serial number.
4. Confirm the connection on your phone if the app asks you to.
5. After the connection, the app checks for a firmware update.

INFO

Once the device is connected, the app will remember it until this device is deleted. After first connection, the device and the app reconnect automatically. BLE wireless is on at the surface and off during a dive. Connect, update and synchronize the device at the surface.

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5.3 Keep firmware current

The dive computer and the other device functions run on firmware. Firmware updates improve device stability, algorithm accuracy and safety. Install all available firmware before diving.

- Every time you connect the device, the app checks for a new firmware version. Check for updates at home before every dive trip and install all available firmware before diving - not on the boat immediately before entering the water.
- **How it works.** When the app finds a new firmware version, a pop-up window will appear informing you that a newer firmware version is available. You do need an internet connection to install it. The app first synchronizes all the dive files from the device (all dives on the device will be erased when firmware is updated). It then transfers the update to the device by BLE wireless. The device checks the digital signature of the update and installs it. All dive configurations and user settings are preserved but it will clear any active No-fly timers and preserved tissue loading.

> **CAUTION**
> Do not close the app, switch off BLE wireless on your phone, or switch off the device during a firmware update. Make sure your phone is charged above 30 % and the device is charged to at least 50 % (two segments of the battery icon).

> **INFO**
> If an update fails, the device rolls back to the previous firmware version. Try again with a charged device.

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5.4 First-dive readiness check

Do this check at the surface, before your first dive and, in short, before every dive.

- **Battery.** The battery icon shows at least two segments (see sections 4.3 and 4.6). It is strongly recommended to dive with a fully charged device.
- **Anti-fog.** You applied the anti-fog solution to the lens and to the AR display projector.
- **App and Firmware**. The device is connected, the settings are synchronized and all available firmware has been installed before the dive.
- **Settings.** The dive mode is correct for this dive. In recreational mode, the gas mixture, conservatism, water type and the maximum depth are correct.
- **Fit and display.** Put the device on. Check that you can see the left and right edges of the display.
- **Readings.** Verify that the readings on surface seem logical. Note that for some vitals the algorithm takes longer to calculate and there for the values take longer to be displayed on the screen. On surface, the depth should be from 0.0 m (0 ft) to 0.3 m (1 ft). Do not start a dive if the Depth is higher than that and contact divePRO.
- **Equipment.** For scuba diving, you carry a backup depth and time instrument and a submersible pressure gauge.

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WARNING

You are responsible for the settings. Check every setting on the device and in the divePRO Cloud app before every dive. Wrong settings give wrong decompression calculations and increase the risk of decompression sickness.

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Part B: Operating divePRO SCUBA

6 Controls: the knock interface

6.1 No buttons, no menu

divePRO SCUBA has no buttons and no menu. You control the device with three kinds of knock on the frame: a single knock, a double knock and a triple knock. Everything else, such as units, brightness and the display position, is set in the divePRO Cloud app before the dive (Chapter 13).

You cannot change settings underwater. Settings that affect decompression, such as the gas mixture and the gradient factors, cannot be changed during a dive.

6.2 Where to knock

Knock anywhere on the flat panel on the left side of the device frame (the shaded area in Figure 11). You do not need to knock on a particular spot.

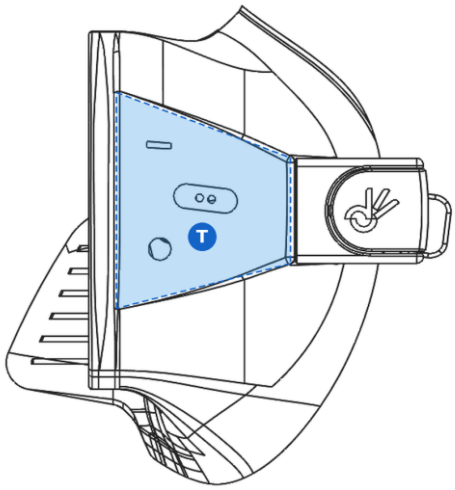


Figure 11 The knock zone: the whole shaded panel on the left side of the device

- Use your left-hand index finger knuckle.
- Knock firmly but gently. Learn how much force is needed by practicing on land first (see chapter 6.6).
- Knocks work with gloves.

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6.3 What each knock does

Table 5 shows what each knock does. The knocks do the same on the surface and underwater. The only difference is the first triple knock, which turns the device on.

Knock	At the surface	Underwater
Single knock	Rolls to the next rolling screen at the bottom of the AR display.	Rolls to the next rolling screen at the bottom of the AR display.
Double knock	Turns the compass on or off.	Turns the compass on or off.
Triple knock	Turns the AR display on or off. When the device is off, turns the device on.	Turns the AR display on or off.

Table 5 What each knock does

WARNING

The AR display turns on by itself when a warning or an alarm is raised. You cannot turn it off while any warning or alarm is active. turn it off again only after the warning or alarm has been cleared.

These are the default functions. You can configure any of the three knocks settings in the app (see chapter 6.5).

6.4 Turning the device on and off

The device turns off in two ways: either you switch it off with the power-off button in the divePRO Cloud app, or it switches itself off after 25 minutes being idle on surface. A knock never turns the device off, and the device does not turn off while it is in dive mode, data synching and firmware update.

When the device is off, it is in a low-power state and keeps counting your surface time. The tissue saturation is stored on the device, and it keeps calculating tissue off gassing during the low power state. Turning the device off between dives does not reset it.

A triple knock turns the device on. The device also turns on by itself and enters dive mode when it detects that you have descended below 1 m (3 ft). This can take up to 30 seconds.

INFO

Do not rely on the automatic start. Turn the device on before you enter the water, and check the AR display, the battery level and the fitting of the device (Chapter 5).

Fully charge the device before every dive. A full charge gives about 10 hours of diving. When the battery is empty, the device does not turn on when you knock three times. The LED blinks red and a low-battery symbol appears on the AR display. If you finish a dive when the battery is below 15 %, the device can keep counting your surface time for at least 24 hours and displays a warning to charge it on the AR Display.

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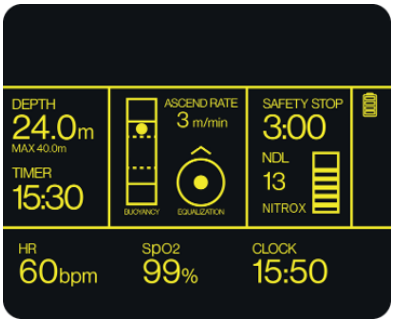
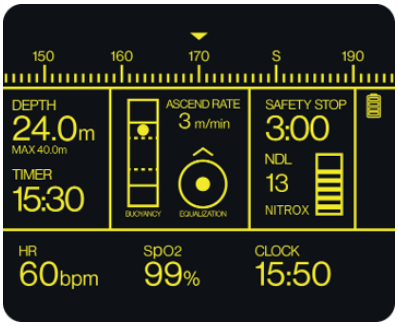
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DANGER

If you start a dive with a low battery, the device lets you dive. It uses its last reserve, which lasts at most 60 minutes of diving, less in cold water. Do not plan a dive on it. The AR display shows a battery-empty alarm with a blinking empty-battery symbol, and the LED on the outside of the device blinks orange so that your buddy can see it. End the dive using your backup equipment.

6.5 Changing the knocks

You can assign up to three of the available four functions, one each, to the single, double, and triple knocks. Choose the assignments in the divePRO Cloud app; they cannot be changed during a dive. The device retains each assignment until you change it again in the app.

No.	Function	What it does
1	Display on or off	Turns the AR display on or off. A warning or an alarm turns it on and keeps it on.
2	Compass on or off	Turns the compass on or off.
 *Compass off*		 *Compass on*
3	Mark a heading	Marks the heading you are on. A marker (an arrowhead) appears on the underside of the compass ruler and points to the marked degrees. It moves along the ruler as your heading changes. If the marked heading is off the screen, a horizontal arrow shows which way it lies. Knock again to clear the mark and knock once more to set a new one at your current heading. Does nothing when the compass is off.

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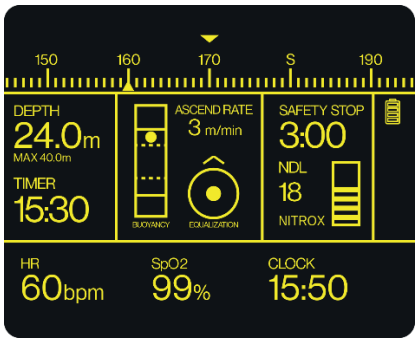
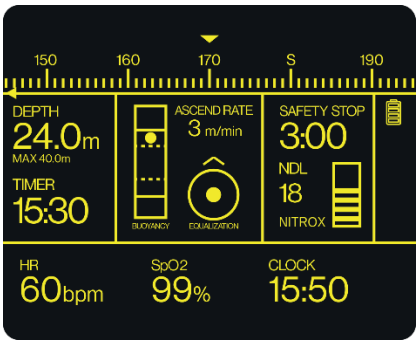
No.	Function	What it does
 *Marked heading on the ruler*		 *Marked heading off the screen: the arrow points to it*
4	Roll the rows	Rolls to the next rolling row at the bottom of the AR display.
 *The rolling row at the bottom of the AR display*		

Table 6 Functions you can assign to the knocks

The first triple knock is different. When the device is off, a triple knock always turns it on, whatever you have assigned to the triple knock of your device configuration. Once the device is on, the triple knock serves the function you assigned to it.

After you change a knock, practice it on land before you rely on it (see 6.6).

6.6 Practice before you dive

Practice the knocks on land before your first dive, and again after you change them. This is how you learn to use the knocks, with or without gloves.

1. With the device off, knock three times. The device turns on.
2. Knock once to roll through the rolling screens.
3. Double knock to turn the compass on and off.
4. Knock three times to turn the AR display off, and three times again to turn it on.
5. Check that each knock does what you set in the app.
6. Practice again with gloves on, and in shallow water such as a pool, with your buddy.

6.7 Protection against accidental knocks

A knock can never turn the device off, and the device does not turn off in dive mode, so you cannot switch it off by accident during a dive. Knocks cannot be reassigned during a dive.

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7 The AR display

7.1 How to look at the display

A small projector on the upper right of the lens projects the AR display onto the lens. The display color is yellow and it appears to float in some distance in front of you.

WARNING

The AR display can distract you from your surroundings. Keep watching your depth, your buddy and the dive site. Do not stare at the display.

CAUTION

Looking at a display can cause eye strain, dizziness or nausea in some people. If you get blurred vision, dizziness or nausea during a dive, stop looking at the display, rely on your backup instruments and end the dive safely.

7.2 The layout

The display has three bands. The compass is at the top. The dive panel is in the middle, with the status icons on its right. The rolling screens (“rows”) are at the bottom. Figure 12 shows the display during a dive with the compass on. Table 7 describes each item.

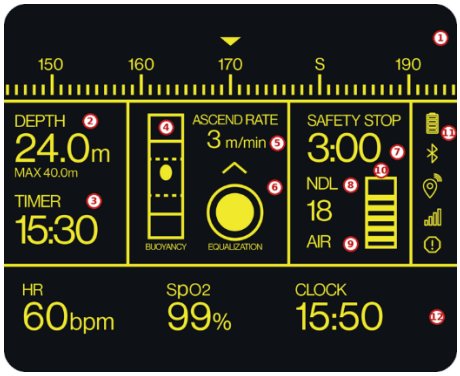


Figure 12 The AR display during a dive, with the compass on

No.	Item	What it shows
1	Compass	The heading ruler. The triangle at the top shows your heading (7.3).
2	Depth and MAX	Your depth now, and MAX, the maximum depth of the dive (7.4).
3	Timer	The dive time in minutes and seconds (7.4). At the surface it keeps its last value (7.4).
4	Buoyancy	How steady your buoyancy is. The dot moves up when you move up and down when you move down (7.8).
5	Ascent rate	How fast you are ascending, in m/min (ft/min). Arrows appear when you ascend too fast (7.6).

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No.	Item	What it shows
6	Equalization	Pressure difference between the inside and the outside of the device. The dot inflates as the difference grows (7.8).
7	Safety stop	The safety stop countdown. In a decompression dive, the stop you must make (7.7).
8	NDL	The no-decompression limit in minutes. When NDL reaches 0 it changes to time to surface (TTS) (7.5).
9	Gas	The gas you set for this dive: AIR or NITROX (7.5).
10	Bar graph	Nitrogen absorption. The bar rises as you absorb nitrogen, so a low bar means a long NDL and a full bar means no NDL left (7.5).
11	Status icons	Battery, BLE wireless, position (GNSS), mobile network (NB-IoT) and the warning symbol for critical alarms (7.9).
12	Rolling screens	Heart rate, blood oxygen and the clock by default. You choose what the screens show in the app (0).

Table 7 Items on the AR display

In this manual depth is shown in meters and ascend rate in meters per minute. In the app you can change the display to imperial units.

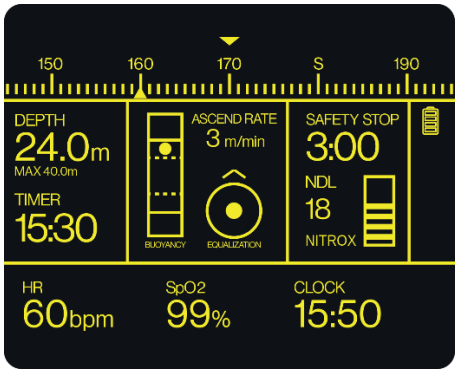
7.3 Compass

The compass is the ruler at the top of the display. Each long mark is 10 degrees. The letters N, E, S and W mark the four directions, and the arrowhead above the ruler shows the heading you are facing.

Knock twice to turn the compass on or off (the default; see 6.3). With the compass off, the top band is empty.

You can mark a heading, and the arrowhead on the underside of the ruler marks it. Chapter 6 explains how to set and clear the mark, and Chapter 10 explains how to navigate with it.

Case	Compass	What the display shows
1	Mark on the ruler	The arrowhead on the underside of the ruler points to the marked degrees and moves along the ruler as you turn.

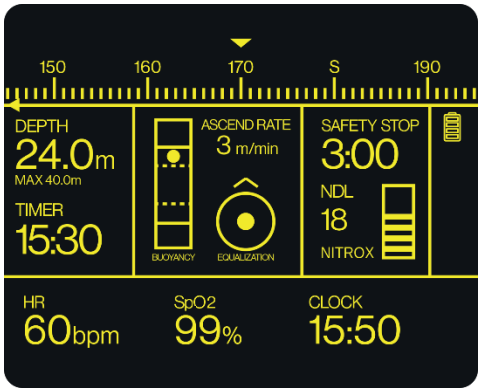


Mark at 160 degrees

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Case	Compass	What the display shows
2	Mark off screen	When the marked heading is outside the ruler, a small arrow at the side of the ruler points the way to turn.



Mark to the left of the ruler

Table 8 Compass with a marked heading

7.4 Depth, maximum depth and dive timer

DEPTH shows your current depth. MAX, below it, shows the maximum depth you have reached during the current dive. The TIMER shows the duration of the dive in minutes and seconds.

> **INFO**
> When you go deeper than 40 m (130 ft), the MAX value blinks. The dive computer functions are intended for recreational diving up to 40 m. This is a diving limit, not a structural limit.

At the surface, the TIMER keeps the value of the last dive until the next dive begins, or until the device is switched off or reset.

7.5 No-decompression limit and gas

NDL is the no-decompression limit: the number of minutes you can stay at your current depth and still be able to ascend directly to the surface. It changes as you change depth.

The bar on the right of the NDL indication shows how much nitrogen your body has absorbed. A low bar means low absorption. As you absorb nitrogen the bar rises and the NDL numeric indication falls. A full bar means the NDL is zero. At the surface, the NDL shows 99.

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State	When	What the display shows
1	NDL steady	More than 5 minutes of NDL left. The bar shows nitrogen absorption.
		 *NDL 30, bar partly filled*
2	NDL blinking	The NDL value blinks when 5 minutes or less are left, until it reaches 0.
		 *NDL value shown*  *NDL value hidden*
3	TTS	When the NDL reaches 0, TTS (the time to surface) replaces the NDL, and the first decompression stop appears in the safety stop field. You must make decompression stops (Chapter 8) before you reach the surface. TTS is a safety indication, and it should never be reached in recreational diving.
		 *TTS and the decompression stop*

Table 9 NDL, nitrogen absorption bar and TTS

The word under the NDL shows the gas for the dive: AIR or NITROX. You set the gas in the divePRO Cloud app before the dive, and you cannot change it during the dive.

If the oxygen partial pressure (PPO_2) of your gas at your depth exceeds 1.4 bar, the PPO_2 value alternates between the gas name and the PPO_2 value every second. The limit of 1.4 bar is fixed and it cannot be changed. This applies to AIR and to NITROX. It means that the gas is not breathable at this depth.

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Frame	Every second	What the display shows
1	Gas name, then PPO_2	The two frames alternate every second while the PPO_2 is above 1.4 bar. Example: PO_2:1.45 bar
 *Frame 1: gas name*		 *Frame 2: PPO_2 value*

Table 10 Gas label and high PPO_2

WARNING

A gas above its PPO_2 limit can cause oxygen toxicity, which can cause convulsions and drowning. When the PPO_2 value appears, ascend until the gas name stays on the display. And the warning stops blinking

7.6 Ascent rate

ASCEND RATE shows your ascent speed in meters per minute (feet per minute). Table 11 shows what the display does at each speed. The Warnings use upward-pointing arrows.

Arrows	Ascent rate	What the display shows
1	Below 8 m/min (26 ft/min)	Very good. One upward arrow.
 *One arrow*		
2	8 to 18 m/min (26 to 60 ft/min)	Warning: you are ascending too fast. Two stacked arrows. Slow your ascent.
 *Two arrows*		

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Arrows	Ascent rate	What the display shows
3	Above 18 m/min (60 ft/min)	Hard alarm: three arrows, and the ascent rate number blinks. Slow down at once.



Three arrows, number shown



Number hidden (blinking)

Table 11 Ascent rate arrows

7.7 Safety stop

The safety stop is a 3-minute stop at 5 m (15 ft) at the end of the dive. When you ascend into that depth range, the SAFETY STOP field counts down from 3:00.

- The countdown runs only while you are between 6.5 m and 3 m (15 ft and 10 ft).
- If you go above or below that range, the countdown pauses. It continues when you return to the range.
- The countdown starts from 3:00 only if you go deeper than 10 m (33 ft).
- In a decompression dive, the safety stop starts following the last deco stop at 3 m (10 ft).

The safety stop appears after every dive. The SAFETY STOP field shows the value of the safety stop timer. When you ascend above 3 m (10 ft), the value freezes, and it stays on the display at the surface.

7.8 Buoyancy and equalization

The BUOYANCY indicator is the vertical bar on the center of the dive panel. The buoyancy algorithm follows your depth, time, acceleration and others and decides whether you are moving up or down on purpose or by accident. The dot shows this movement: if you move up, the dot moves up. If you move down, the dot moves down.

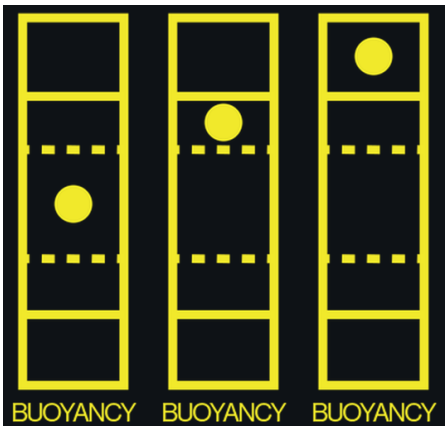


Figure 13 Buoyancy indicator: very good (left), medium (center), bad (right)

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Dot position	Buoyancy	How far you have moved
Between the two dotted lines	Very good	Buoyancy fluctuates within 30 cm (1 ft)
Between a dotted line and a solid line	Medium	Buoyancy fluctuates within 30 to 60 cm (1 to 2 ft)
Outside the solid lines	Bad	Buoyancy fluctuates more than 60 cm (2 ft)

Table 12 Buoyancy indicator

The middle of the bar is perfect buoyancy: no vertical movement.

The EQUALIZATION indicator is the circle on the right of the BUOYANCY indicator. The dot in the circle shows the pressure difference between the inside and the ambient pressure of the device. The dot inflates as the difference grows and deflates as the difference falls. When the dot completely fills the circle, equalize the device immediately.

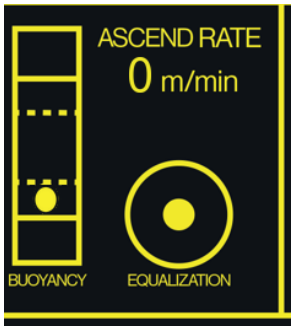
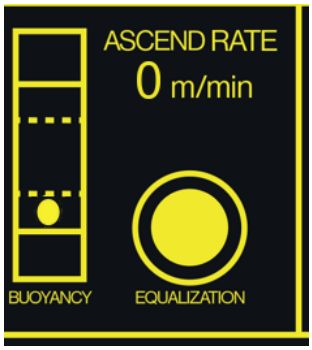
State	Circle	What it means
1	Small dot	The pressure difference is small. The dot inflates as the difference grows.
		 *Equalization: small dot*
2	Dot fills the circle	The pressure difference is large. Equalize the device immediately.
		 *Equalization: almost full*

Table 13 Equalization indicator

CAUTION

If you do not equalize the device, it presses on your face and eyes (device squeeze) and can cause injury. To equalize the device, breathe out gently through your nose into the device.

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7.9 Status icons

The status icons are in the column on the right of the dive panel. Table 14 shows how they look in each state.

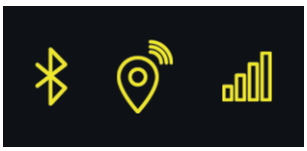
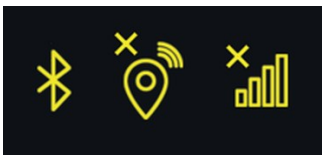
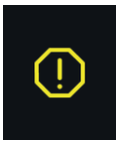
State	Icons	What it means
1	Battery	The charge left in the device. A full icon means a full battery (see Chapter 4).
 *Full*		 *Low*
2	Searching	BLE wireless, GNSS (position) and NB-IoT (mobile network). After the device is turned on, each icon blinks once per second while it is searching for its respective connection. Once connected the icon remains permanently on until a dive starts
 *Icon shown*		
4	Not found	The icon is on, with an x at its top left corner: the search failed, so the Information was not received. This stands for NB-IoT and GNSS only.
 *BLE, GNSS and NB-IoT not found*		
5	Warning	The warning symbol appears and blinks on critical alarms. It does not appear on simple Warnings (see Chapter 11).
 *Symbol shown*		 *Symbol hidden*

Table 14 Status icons

The status icons stay on display all the time during the dive. BLE wireless, GNSS and NB-IoT are switched off during the dive, but their icons stay visible and keep the state they had before the dive.

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7.10 Rolling screens

The bottom row shows a rolling screen with three values. Knock once to roll to the next screen (the default; see 6.3). Table 15 shows the four screens of the default configuration.

Screen	Values	Picture
1	Heart rate, SpO_2, clock	Heart rate in beats per minute, blood oxygen in %, and the time of day.
		 *Heart rate, SpO_2 and clock*
2	Blood pressure and temperatures	BP: It shows how your blood pressure changes between the surface and underwater during the stages of the dive. It represents Systolic and Diastolic Blood Pressure. Mask correspond to the temperature inside the mask and the Water to the actual water temperature.
		 *SBP, DBP and Temperatures*
3	Heart rate variability	Heart rate, Respiratory Rate (BRPM) and RRV in ms
		 *HR, RR and RRV*

Table 15 Rolling screens (default configuration)

INFO

These screens are an example of the default configuration. In the app you can choose what you want to see on the rolling screens. In addition to these parameters, one can select to see also the following. Calories, Compass Heading, Saturation, Surface Time, No Flight Time,

CAUTION

All vital Information is an estimate only. divePRO SCUBA is not a medical instrument. Do not use it to diagnose, treat or make medical decisions. See Chapter 9.

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After each dive, the surface screen takes the place of the rolling screens. The rest of the display stays as the default screen. The surface screen shows three values:

- SF, the surface time. It shows minutes (min) and seconds (sec). When an hour has passed, it shows hours (h) and minutes (min). If the device is idle and there is no active BLE connection for 25 min it powers off automatically.
- NFT, the no-fly time. It is shown in whole hours (h).
- SAT, the remaining saturation in %. It goes back to 0 when your tissues have discharged completely.

CAUTION

Saturation calculation is offline and is an estimate.

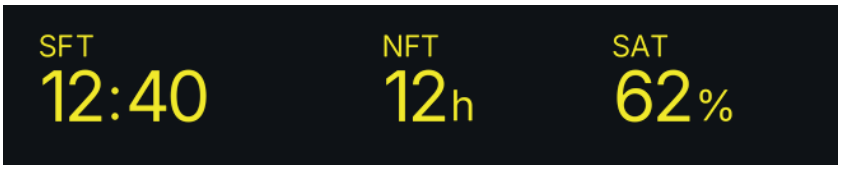
Screen	Values	Picture
5	Rolling row with after dive info	If selected in rolling rows the user can see the current surface time which resets to 0 after 25 min of inactivity, the No Flight Time and the current tissue saturation level.
		 *SF 12 min 40 sec, NFT 12 h, SAT 62 %*

Table 16 Surface screens

The rest of the display shows the surface state:

- Depth is 0.
- MAX shows the maximum depth of the dive you have just finished. It resets when a new dive starts, when the device is reset or powered off and on again.
- The ascent rate is 0 and the NDL is 99. The nitrogen bar is empty.
- The clock shows the current time.
- The timer keeps the value of the last dive. It stays frozen until a new dive begins. If you turn the device off before then, it goes back to 0.
- The safety stops field shows the last value of the safety stop timer.

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7.11 Other Emergency Screens

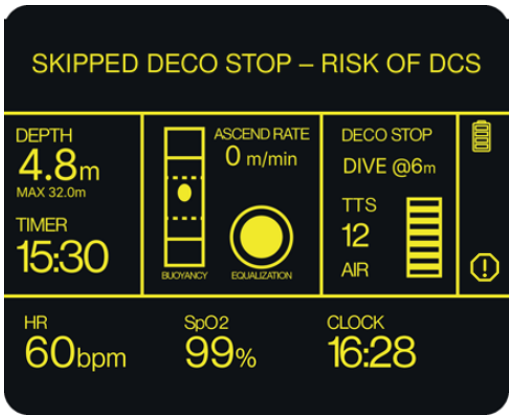
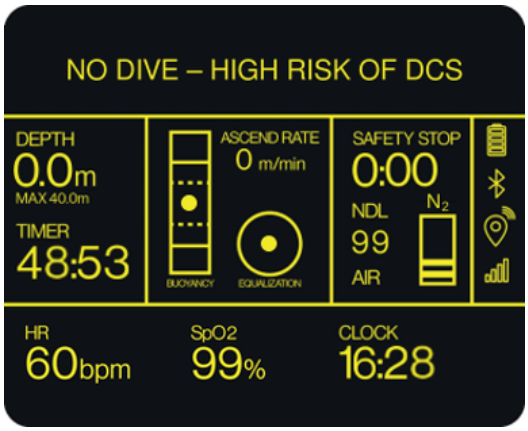
Screen	Values	Picture
1	Skipped deco stop	In the event that the diver skips a stop or does not clear a deco stop the dive computer will inform the diver to dive to the corresponding depth but will issue an alarm and will provide a message on the deco stop area as well as on the top of the screen
		 *Skipped deco stop*
2	No dive after deco violation	In the event that the diver violated the proposed deco stops the device issues an alarm and the following screen is presented
		 *Violated deco stops (Violated ceiling)*

Table 17 Emergency screens

WARNING

If DO NOT DIVE - RISK OF DCS flashes, do not dive. The dive computer does not stop working, but a dive with this warning has a high risk of decompression sickness. Chapter 8 explains the no-fly time.

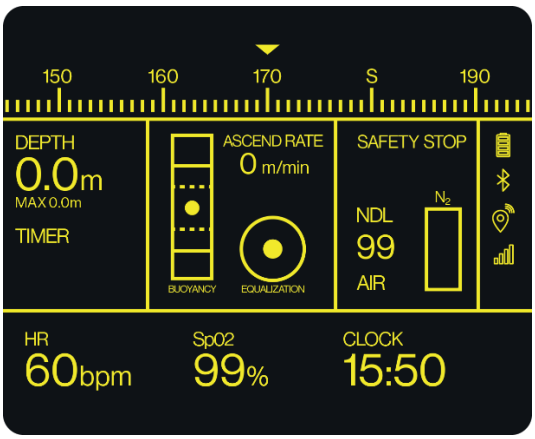
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7.12 The display during the dive

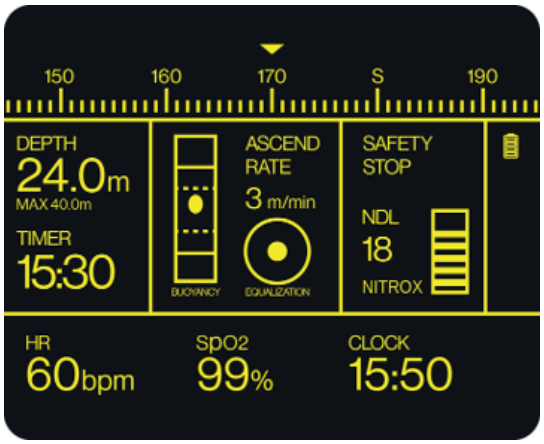
What the display shows depends on the phase of the dive. Table 17 shows each phase.

Phase	When	What changes on the display
Surface	Before the dive	The default screen with the rolling screens. At the surface the depth is 0.0 m, the NDL is 99, and the safety stop field and the TIMER show their last values.



Surface, before the dive

At depth	Descent and the dive	Depth, MAX, timer, NDL and gas, the status icons and the rolling screen. The compass is off.

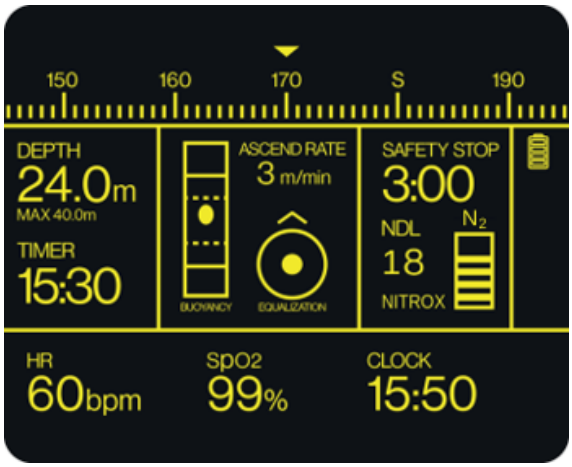


At depth, compass on

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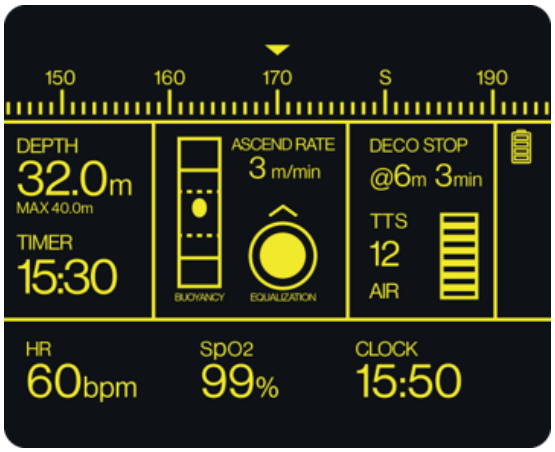
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Phase	When	What changes on the display
Ascent	Ascent and safety stop	The ascent rate and its arrows. The safety stop countdown appears at 5 m (15 ft).



Safety stop countdown, compass on

Decompression	If the NDL reaches zero	The first decompression stop appears in the safety stop field (here DECO STOP, 3 min at 6 m, 20 ft), and TTS, the time to surface, replaces the NDL.

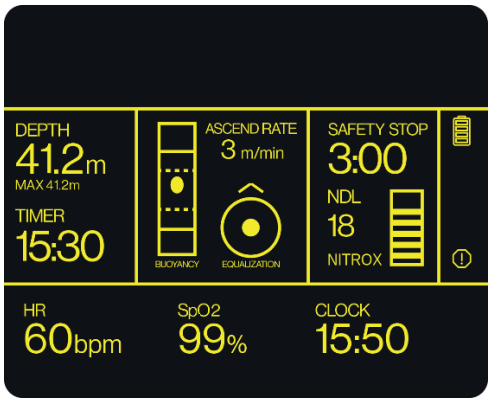


Decompression stop

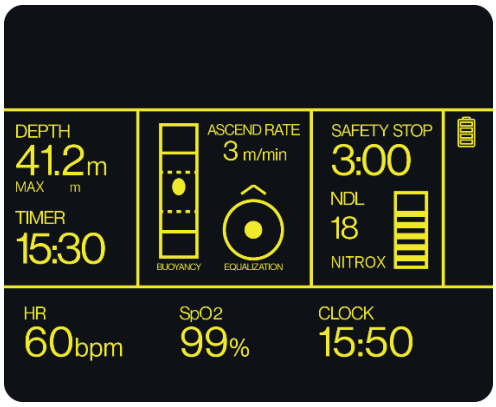
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Phase	When	What changes on the display
Alarm	Any warning or alarm	The display turns on and stays on while the warning or alarm is active (see 7.14). For a simple warning, only the related value blinks. For a critical alarm, the value blinks together with the warning symbol. The picture shows depth beyond 40 m (130 ft).

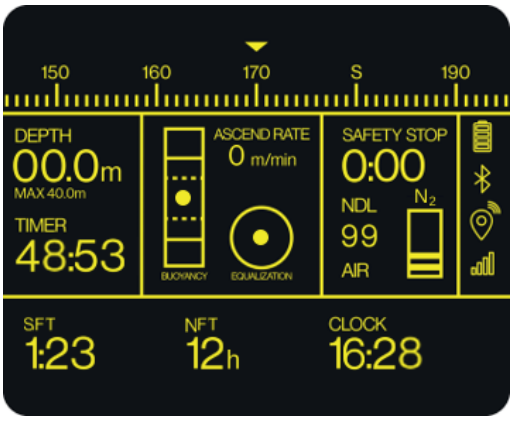


Critical alarm: MAX and the warning symbol shown



Critical alarm: MAX depth value and the warning symbol hidden

Surface interval	After the dive	After each dive the default screen stays. The TIMER and the safety stop value stay frozen at their last values, the NDL is 99, and the surface after dive values (SFT, NFT and SAT) can be displayed if programmed in rolling rows (see 0).

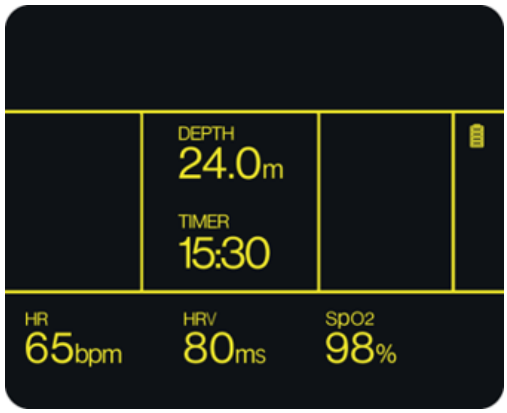


Screen on surface after dive

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Phase	When	What changes on the display
Gauge mode	Gauge dive	Depth and the dive time are shown in the middle of the screen. The rolling screens show the vitals, the clock and the water temperature, and the status icons stay where they are. Nothing else from the dive panel is shown.



Gauge mode

Table 18 The display by phase

WARNING

In gauge mode the dive computer shows no ascent rate and gives no NDL, decompression or ascent Warnings. You are responsible for your ascent speed and your stops. Use other instruments and tables.

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7.13 Brightness and position

You can configure the brightness and the position of the display in the divePRO Cloud app, before the dive. You cannot change them from the device.

The device also reads the light around you, dims the display when it is dark, and lights it up when there is high ambient luminance so that the display does not disturb you. The maximum percentage of the brightness set from the sensor is the one set from you in the app.

- Brightness: from 0 to 100 %. Start at about 100 % and adjust it at your first dive.
- Position, horizontal: you can move the display two steps to the left or to the right of the default position.
- Position, vertical: you have three steps in total from the default position: one step down and two steps up.

In the divePRO Cloud app, go to **Device Settings → Display → Brightness or Position.**

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7.14 Warnings, alarms and the display

The device signals Warnings and alarms on the AR display. When a warning or an alarm starts, the display turns on, even if you have turned it off. You cannot turn the display off while any warning or alarm is active.

These are critical alarms. A recreational dive is a dive without decompression. If you enter decompression, something has gone wrong, for example you stayed deeper or longer than planned. That is why NDL at zero and the decompression alarms are critical alarms and not simple Warnings. On a critical alarm the warning symbol blinks, and the orange LED blinks so that your buddy can see it:

- Depth beyond 40 m (130 ft)
- PPO_2 above 1.4 bar
- NDL at zero (decompression is required)
- A decompression stop (Deco)
- A violated decompression stop
- A skipped decompression stop
- Ascent rate above 18 m/min (60 ft/min)

For a warning, the related value blinks. For example, the NDL blinks when 5 minutes or less are left. For a critical alarm, the related value blinks together with the warning symbol, and the orange LED blinks. Chapter 11 describes every warning and alarm.

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8 Dive computer functions

8.1 Dive modes

The device has two modes. In dive computer mode, the device calculates the nitrogen your body absorbs, shows your no-decompression limit and issues alarms. In gauge mode it shows depth and time, without the dive computer functions (see 8.8). You can choose the mode in the app before the dive, and you cannot change it during the dive.

> **WARNING**
> The divePRO SCUBA is for recreational diving without decompression. Plan every dive as a dive that does not need decompression stops. The dive computer functions are intended for recreational diving to 40 m (130 ft).

The device has two depth alarms. The first is the device depth alarm at 40 m (130 ft). It is fixed and you cannot change it. The second is your certification depth. You can edit it in the divePRO Cloud app, at **Device Info → Dive → Configuration → Depth**. The default comes from your certificate under **More → Dive Certifications** where you can add a certificate. When you go deeper than your certification depth or your set depth, the MAX depth value blinks. This is a warning only: the warning icon and the led do not blink. the 40 m alarm is a critical one and makes the warning icon blink (see 11.1). In gauge mode there are no Warnings.

You set the water type in the app before the dive. There are three settings: Salt water, Fresh water and Standard water. The default type is the standard water. The device also measures the ambient pressure all the time, so it knows before the dive if you are at altitude and uses it in its calculations. You set this in the divePRO Cloud app at **Device Settings → Dive Configuration → Salinity**

8.2 Decompression model and gradient factors

The device uses the Bühlmann ZHL-16C decompression model with gradient factors. The gradient factors set how much margin the device keeps. A higher-level conservatism gives more margin. In the divePRO Cloud app you choose LOW, MEDIUM or HIGH. The app displays the gradient factors in a tool tip under the question mark icon (?) at **Device Settings → Dive Configuration → Dive Conservatism**. You can choose one of three conservatism levels in the app. The setting applies to the NDL, the stops and the no-fly time. The default setting is Medium which corresponds to 40/85.

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Conservatism	Gradient factors (low / high)	What it means
Low	35 / 75	The least margin: a longer NDL and shorter stops. For experienced divers diving well within their limits.
Medium (default)	40 / 85	A balanced setting for most recreational divers.
High	45 / 95	The most margin: a shorter NDL and a deeper first stop.

Table 19 Conservatism levels

WARNING

No decompression model removes the risk of decompression sickness. Repetitive dives, cold, dehydration, age, fatigue and flying after diving all reduce your tolerance. When any of these apply, choose a more conservative level.

8.3 Gas: air and nitrox, PPO_2

The device supports AIR and NITROX with up to 50 % oxygen. You set the mixture in the divePRO Cloud app. You can use one gas per dive, and you cannot change it during the dive. The AR display shows the gas under the NDL (see 7.5).

WARNING

Analyze your gas yourself and enter the oxygen percentage you measured. A wrong entry gives a wrong NDL and a wrong oxygen alarm.

The oxygen partial pressure (PPO_2) limit is 1.4 bar. You cannot change it. When the PPO_2 of your gas at your depth goes above 1.4 bar, the PPO_2 value and the gas name alternate on the display every second, and a critical alarm is activated (see 7.5 and 7.14). Ascend until the gas name stops blinking on the display.

The deepest depth at which a NITROX mixture keeps the PPO_2 at or below 1.4 bar is its maximum operating depth. Table 20 shows it for common mixtures.

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Oxygen	Maximum operating depth, m	Maximum operating depth, ft
32 %	33	108
36 %	28	91
40 %	25	82
50 %	18	59

Table 20 Maximum operating depth at PPO_2 1.4 bar

The device also calculates your oxygen exposure (CNS and OTU) and records it in the dive log.

8.4 No-decompression limit

The NDL is the number of minutes you can stay at your present depth and still ascend directly to the surface. It depends on your depth, on your earlier dives and on the conservatism level you chose. It changes as you change depth. At the surface, and for a long NDL, the display shows 99.

The bar beside the NDL shows how much nitrogen your body has absorbed. A low bar means low absorption and a long NDL. A full bar means that the NDL is zero.

In the last 5 minutes of NDL, the NDL value blinks. When the NDL reaches zero, it changes to TTS, the time to surface, and the device shows the first decompression stop (see 8.7). Chapter 7 shows these screens (7.5).

WARNING

Do not dive to the end of the NDL. Start your ascent with time to spare and finish the dive with a safety stop.

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8.5 Ascent rate

The device measures how fast you ascend and displays it as ASCEND RATE. Table 21 shows the three levels.

The device updates the ascent rate every second.

Ascent rate	Level	What the display shows
Below 8 m/min (26 ft/min)	Very good	One arrow
8 to 18 m/min (26 to 59 ft/min)	Warning	Two stacked arrows
Above 18 m/min (59 ft/min)	Alarm	Three arrows, and the ascent rate number blinks

Table 21 Ascent rate levels

A slow ascend of <8m/min is recommended. Chapter 7 shows the arrows (7.6).

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8.6 Safety stop

The safety stop is a 3-minute stop between 6.5 m and 3 m (21 ft and 10 ft) at the end of every dive. It reduces the risk of decompression sickness.

- The countdown starts at 3:00 when you reach 6.5 m (21 ft).
- If you go above 3 m (10 ft) or below 6.5 m (21 ft), the countdown pauses. It continues when you are back between 5 m (15 ft) and 3 m (10 ft).
- The countdown starts again from 3:00 only if you go deeper than 10 m (33 ft).
- After a decompression dive, the safety stop follows the last stop at 3 m (10 ft).

The safety stop appears after every dive. At the surface, the safety stop field keeps its last value.

The safety stop is recommended. The device does not give an alarm if you skip it.

8.7 Beyond the limits: deco mode

The device is built for recreational diving without decompression. Deco mode is a safety net for when something goes wrong, for example when you stay deeper or longer than you planned. It is not a tool for planning decompression dives.

DANGER

Do not plan decompression dives with this device. Deco mode is for emergencies only. A dive that needs decompression has a higher risk of decompression sickness.

Beyond 40 m (130 ft), the MAX depth value blinks together with the warning icon, as a critical alarm. The device keeps calculating your nitrogen absorption.

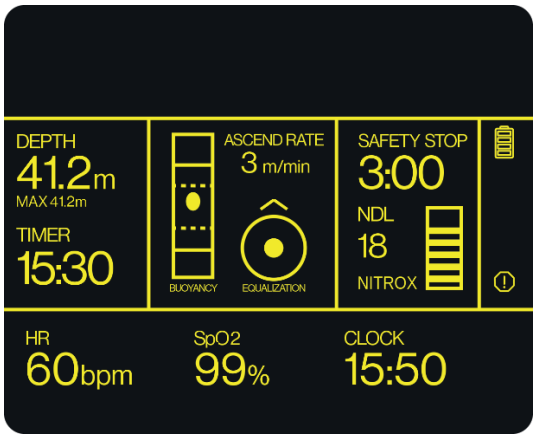


Figure 14 MAX depth and warning icon shown

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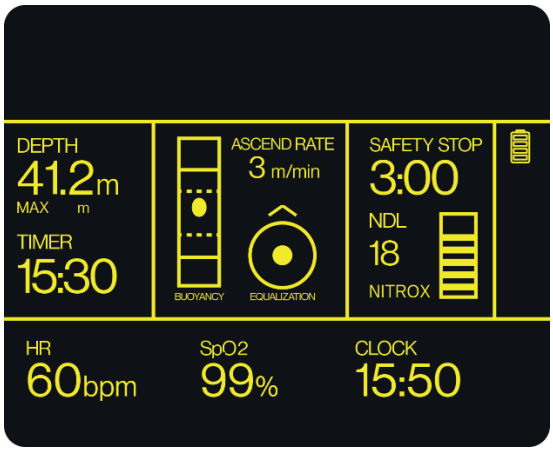


Figure 15 MAX depth and warning icon hidden (they blink)

When the NDL reaches zero, TTS replaces the NDL and the first decompression stop appears in the field under DECO STOP, with its depth and its time. Stops are at 3 m (10 ft) intervals. Ascend to the stop depth, stay for the time shown, then ascend to the next stop once the stop is cleared and the next stop appears. Follow all stops, and then the safety stop, before you ascend to the surface.

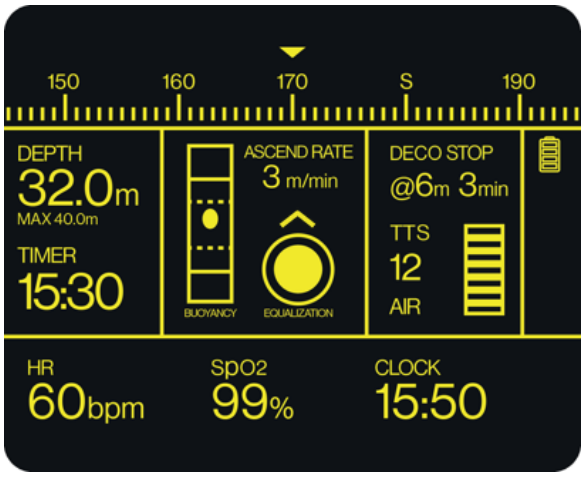


Figure 16 First decompression stop: 3 minutes at 6 m

If you leave a stop before its time has ended (stop violated), or you cross the stop depth without stopping (stop skipped), the device informs you to descend to the required stop depth. If you are still deeper than the ceiling, the device asks you to go back down and updates the next stop at once. If you cross the ceiling depth, a critical alarm is activated, the line that showed the stop (for example @6m 3min) changes to DIVE @6m, or DIVE @20 ft if you use feet, and blinks together with the warning icon until you reach that depth. The ascent rate shows 0 m/min (0 ft/min) while you descend. The message SKIPPED DECO STOP - RISK OF DCS appears on the top of the screen.

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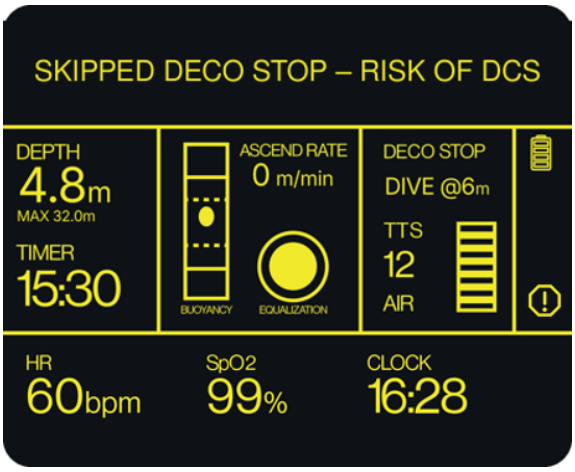


Figure 17 Stop skipped: the device asks you to descend to 6 m (shown)

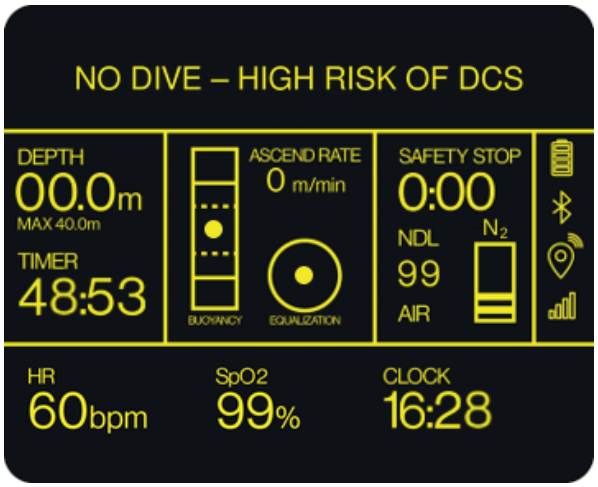


Figure 18 The same screen when the blinking items are hidden

The device always shows what you need to do to avoid decompression sickness, whether you have the gas to do it. The device does not read your tank pressure, so it does not know how much gas you have. Following the instructions is your decision.

DANGER

If you cannot make a stop because you are low on gas or have an emergency, your safety comes first: ascend, follow your emergency procedures and training. If you are in such situation, seek medical attention ASAP

After a violated stop, DO NOT DIVE RISK OF DCS flashes in the compass area whenever the device is activated within the next 48 hours. The no-fly time is 48 hours after such event (see 8.9).

8.8 Gauge mode and snorkeling

In gauge mode the device shows depth and dive time. The rolling screens show the vitals, the clock and the water temperature or any other selected options from the app, and the status icons stay where they are. Nothing else from the dive panel is shown. The device does not use the saturation

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model, it does not calculate or store your nitrogen, and it gives no NDL, no decompression Information, no ascent rate and no Warnings.

The compass, the buoyancy indicator and the equalization indicator are not available in gauge mode. Equalize your device as you would with any dive device.

Use gauge mode for snorkeling and for dives where you plan your decompression yourself, with tables or another computer. You switch to gauge mode in the divePRO Cloud app before the dive, at your own risk.

> **WARNING**
> Gauge mode is used at your own risk. The device does not calculate dive Information in this mode. You are responsible for dive planning and for your own safety.

8.9 Surface interval, desaturation and no-fly

At the surface, the device keeps calculating how much nitrogen is discharged from your system. After each dive, rolling rows can be configured to show surface time (SFT), no flight time (NFT) and tissue saturation (SAT). SAT is 0 when your tissues have discharged completely. Turning the device off, does not reset the calculation.

Table 22 shows the minimum wait before you fly.

After	Wait at least
A single dive without decompression	12 hours
Repetitive dives, or dives on several days	18 hours
A decompression dive	24 hours
A dive in gauge mode, or a violated decompression stop	48 hours

Table 22 Minimum wait before you fly

The NFT is never shorter than the time the device needs to simulate off gassing of your tissues. The same wait applies before you go to a high altitude (more than 300 m, or 1,000 ft, above the dive site), for example on a mountain.

The no-fly time is also displayed on your phone, in the divePRO widget. The widget keeps its own countdown, which does not depend on the clock of your phone. It checks itself against the device each time your phone connects to it during the no-fly time. The device is the reference measurement. If the two differ, use the longer time.

> **WARNING**
> The no-fly time is a guide, not a guarantee. Flying too soon increases the risk of decompression sickness. After several dives a day or several days of diving, add a comfortable margin. If the device loses power during a dive, it may give a more conservative no-fly time.

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8.10 Dive log on the device

The device records every dive in its internal memory, with 5 second intervals. It holds many dives, so you can dive for several days before you must synchronize with the app. Synchronize after each diving day, so that your dives are saved to your account and you can monitor your performance and advanced analytics.

At the start of each dive, the log saves these settings and conditions:

- Date and time, dive mode and dive number
- GNSS position, altitude, accuracy and fix, if available
- Units, gas, oxygen percentage, gradient factors and PPO_2 limit
- Battery level, depth limit and display settings
- Starting saturation
- Ambient pressure, temperature and light

During the dive, each line of the log contains:

- Time, depth, NDL, ceiling, TTS, deco stop depth and time, and whether you are in decompression
- PPO_2, CNS, OTU and tissue saturation
- Ascent rate, buoyancy and equalization
- Water temperature, device temperature, water pressure, pressure inside the device and ambient light
- Dive events and alarms
- HR, HRV, respiratory rate (RR, RRV), SpO_2, blood pressure estimate (SBP and DBP) and calories
- Battery voltage and compass heading

You cannot open the log onto the device. Download it though the divePRO Cloud app. The app shows the date of the last synchronization and the number of dives stored. Sync your data before the memory reaches the full limit. In this case the device will start to overwrite the oldest file in the directory. In order not to lose any dive files sync them regularly. After syncing the dives are erased from the device.

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9 Vital signs

9.1 What is measured

A sensor on the device rests against your left temple and reads your vitals through the skin. From the optical signal, the device calculates the values in Table 23.

Value	Unit	What it tells you
HR, heart rate	bpm	How fast your heart is beating.
SpO_2, blood oxygen saturation	%	The share of oxygen is carried in your blood.
HRV, heart-rate variability	ms	How much the time between heartbeats varies. It changes with stress and fatigue.
RR, respiratory rate	brpm (breaths per minute)	Your breathing rate
RRV, respiratory-rate variability	ms	How much your breathing rhythm varies.
Breath temperature	°C (°F)	The temperature of your breath inside the mask.
SBP and DBP, blood pressure estimate		An estimate of your systolic and diastolic blood pressure (see 9.2).
Cal, energy	kcal	An estimate of the energy you have used. It is based on your heart rate, age, gender and weight.

Table 23 Values measured by the sensor

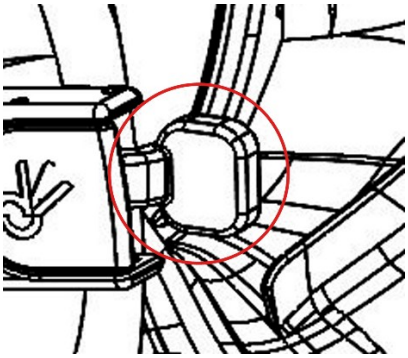


Figure 19 The vital-sign sensor on the inside of the device (circled)

The device displays these values on the rolling screens (see 0). You choose in the app which values appear and in what order.

9.2 How it works

The sensor emits light into the skin and measures the reflected portion. Each heartbeat circulates the blood flow under the sensor, and the device reads the values from this change.

For the values to be right for you, the device needs to know your body and your normal resting values. This is done in two steps.

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Step 1: set up your profile in the app. The app asks for your gender, height, weight and date of birth. The device uses them to set your baseline values.

Step 2: enter your resting values in the app. Measure your resting heart rate and your resting blood pressure with an independent device, such as an upper-arm blood pressure monitor, while you sit calmly. Enter both values in the app. The device uses them to calibrate the sensor and its calculations to you. Update the values regularly.

WARNING

The blood pressure on the rolling rows is an estimate, not a medical measurement. The device estimates it with an optical sensor, from the shape of your pulse and its timing. It is calibrated to the resting values you entered. It is meant to show how your blood pressure changes between the surface and underwater during the dive. If you do not enter a resting blood pressure, the device still shows an estimate based on default baseline values, but the estimate is unreliable. DO NOT DEPEND ON IT

Calibration on every fit. Every time the sensor sits on your temple, it spends the first 10 seconds adjusting to your skin tone and to the position of the sensor on your skin. Ensure that the device fits correctly and keep it still for these 10 seconds. Until the device has a valid calculation, the indication shows 0.

Because the device calibrates at fit, wear it on the surface and before you enter the water (see 6.4). If the device starts by itself when you start a dive, the calibration takes place in the first 10 seconds of that dive.

9.3 Getting a good signal

The sensor works best when it rests firmly on clean, dry skin at your left temple. To get a good signal:

- Fit the device correctly after you turn it on, and do not adjust it afterwards.
- Keep hair, a hood edge or a neoprene seams out from between the sensor and your skin.
- Do not use creams or oils in the temple area.
- Do not tighten the strap to force contact. The sensor presses against your skin on its own.
- Stay still for the first 10 seconds after the device starts.

Cold, hard exercise and quick movements of your head reduce the quality of the readings. When the signal is poor, a value stays at its last reading. If the sensor loses contact with your skin, for example when water gets under it, the values disappear. When contact is back, each value starts again from 0 and the device resumes its calculation.



Figure 20 Good signal: values shown

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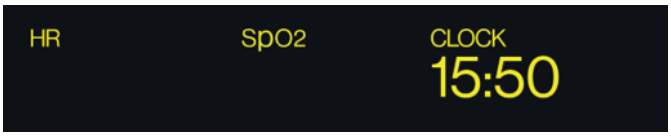


Figure 21 No contact: values are hidden

9.4 Reading vitals on the AR display

The vitals are on the rolling rows in the bottom band of the AR display. Knock to roll to the next screen. Table 15 shows the default screens. This section never replaces the depth, time and decompression Information in the middle of the display.

You can read the vitals as a trend. Look at how a value changes during the dive, more than at a single number. For example:

- A steady heart rate through the dive indicates that you are relaxed and use your gas calmly.
- A heart rate that rises while your depth is steady usually indicates work, cold or stress.
- A breathing rate that rises together with the heart rate is an indication that you are working too hard.

The device gives no alarm for the vital signs.

9.5 Limitations underwater

Readings while diving can become less accurate than readings at the surface. Cold water narrows the blood vessels in the skin and reduces signal, moving your head and the movement of the device can make the signal noisy. Estimations may stay unchanged, jump or be late for a few seconds.

The blood pressure shown is an estimate, based on the resting values you entered. It can differ from a measurement with a medical device, and the difference can grow when you are cold, tired, under stress or working hard.

A device that sits badly, or has been moved after the start-up calibration, gives less accurate readings. If your readings look wrong, check the fit of the device at the surface.

9.6 What vitals are not for

> **WARNING**
> The divePRO SCUBA is not a medical device. The vital sign values are estimates and for your awareness only. Do not use them to diagnose or treat any condition, and do not use them to decide whether it is safe to dive, to continue a dive or to fly.

The vital signs do not change the dive computer. The no-decompression limit, the stops and the no-fly time do not use your heart rate or your blood pressure.

If you feel unwell, trust your body before the device. End the dive, ascend at the correct rate and seek medical help.

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10 Navigation and awareness

10.1 Compass

The compass gives you a steady, tilt-compensated heading. It stays steady when lean forward or backwards or tilt your head. It is displayed as ruler at the top of the AR display (see 7.3).

Knock to turn the compass on or off (the default; see 6.3). With the compass off, the top band is empty. A knock that is set to mark a heading does nothing while the compass is off.

The compass is calibrated using the divePRO Cloud app. Calibrate it away from metallic objects such as boats, tank racks and cars, and away from strong magnets. Calibrate it again if the heading looks wrong or if you moved geographic location. The compass is not available in gauge mode.

> **WARNING**
> The compass is for general orientation only. Steel tanks, metal wrecks, boat hulls, underwater cables and other diving equipment and well as environmental conditions and local magnetic fields can disturb it. Check your heading against a visual reference and never rely on the compass alone for critical navigation.

10.2 Entry and exit positions

The device records where you enter the water. The divePRO Cloud app uses this point to indicate on the map where your dive took place.

- Before the dive, the device searches for a satellite fix (GNSS). The GNSS icon blinks while the device searches and stays on when it has a fix (see 7.9).
- When it has a fix and you start the dive near the surface, the device records your entry position.
- Satellite signals do not reach underwater, so the device does not use them during the dive. It estimates your movement from the compass, your depth and the motion of the device.
- When you come to the surface, the device looks for a fix again and records your exit position.

A good fix needs a clear view of the sky. In open sky it takes about 30 seconds. Tall obstacles, thick cloud and a boat roof slow it down.

The positions are saved in the dive log. You see them on the map in the app after you synchronize (see 8.10).

In case where a GNSS fix was not obtained, no location data are stored.

10.3 Marking a heading

You can mark a heading to swim a straight line and return the same way. Marking is one of the functions you can assign to any knock in the divePRO app (see 6.5). It is not assigned by default.

- In the compass is not visible, turn it ON. Face the direction you want to mark.
- Knock. The mark is set at your heading, and an arrowhead appears on the underside of the compass ruler. The arrowhead moves along the ruler as you turn. Keep it under the triangle to stay on your heading.

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- If the mark is outside the ruler, a horizontal arrow at the side of the ruler shows which way to turn.
- Knock again to clear the mark. Knock once more to set a new mark at your present heading.

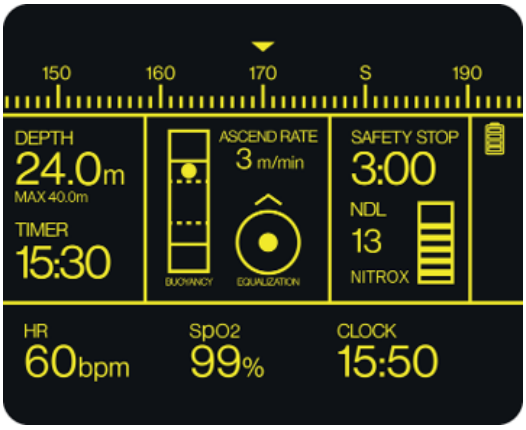


Figure 22 A mark at 160 degrees on the ruler

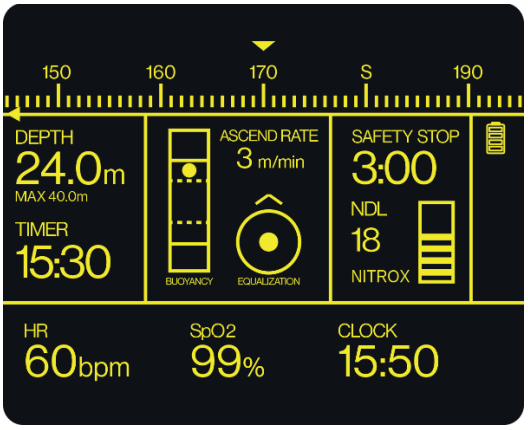


Figure 23 The mark is to the left of the ruler: turn left

To go back the way you came, turn until your heading is 180 degrees from the mark. For a mark at 160 degrees, the return heading is 340 degrees.

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11 Alarms, notifications and failure modes

11.1 How alarms work

The device shows alarms on the AR display. It uses no sound and no vibration, so look at the display when you have a reason to doubt your dive. There are two levels:

- A warning is a first notice. The value that has a problem blink.
- A critical alarm needs your action. The value blinks together with the warning icon, and the LED on the outside of the device blinks orange, so your buddy sees it too.

When a warning or an alarm starts, the AR display turns on and stays on, even if you had turned it off with a knock. The alarm limits are fixed. The only exception is your certification depth, which you set in the app (see 13.2).

A solid orange LED is not an alarm. It means a start-up error or a hardware error (see 11.4).

WARNING

An alarm system can alarm when nothing is wrong and can fail to alarm when something is wrong. Do not depend on the device alone. Watch your depth, time, gas and ascent rate, dive with a buddy and carry a backup depth and time instrument device.

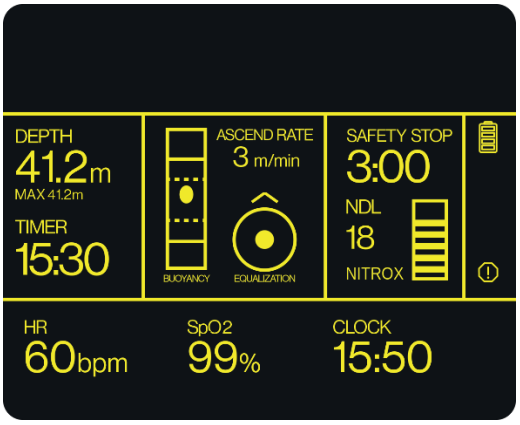
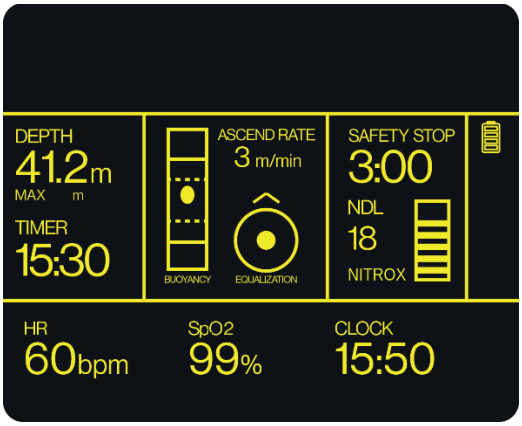
11.2 Warnings and alarms during the dive

Table 24 lists every warning and alarm that comes from your dive. Chapter 7 shows the displays, and Chapter 8 explains the rules.

Event	What it is	Picture
1	NDL, 5 minutes left	WARNING. The NDL value blinks from 5 minutes until it reaches 0. Start your ascent.
		 *NDL value shown*  *NDL value hidden*
2	Fast ascent	WARNING. Your ascent rate is between 8 and 18 m/min (26 and 59 ft/min). Two arrows show. Slow your ascent.
		 *Two arrows*

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Event	What it is	Picture
3	Ascent above 18 m/min	Critical alarm. Three arrows show, and the ascent rate number blinks with the warning icon. Slow down at once.
	 *Rate shown*	 *Rate hidden*
4	Deeper than your certification depth	WARNING. You are deeper than the certification depth you set in the app. Only the MAX depth value blinks. Ascend to a shallower depth.
5	Depth beyond 40 m (130 ft)	Critical alarm. The MAX depth value blinks with the warning icon. Ascend. You are outside the limits for recreational diving. The device keeps calculating.
	 *Shown*	 *Hidden*
6	PPO_2 above 1.4	Critical alarm. The PPO_2 value and the gas name alternate every second, with the warning icon. Ascend until the gas name stays on the display.
	 *PPO_2 shown*	 *Gas name shown*

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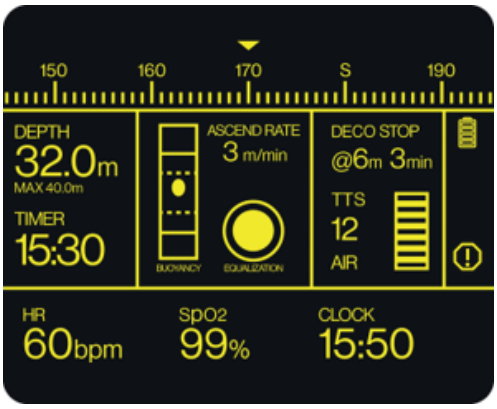
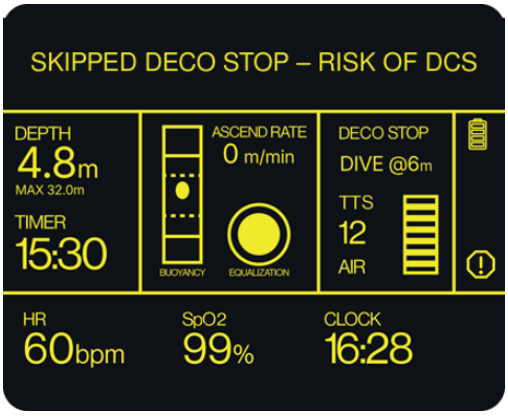
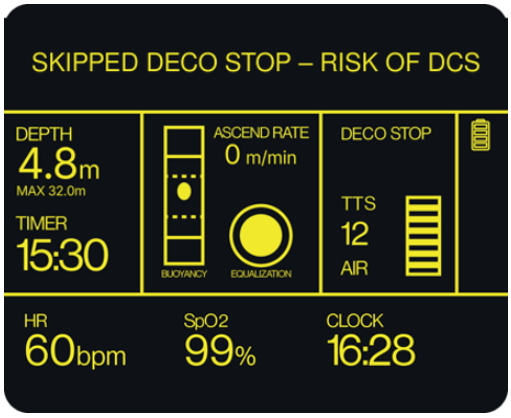
Event	What it is	Picture
7	NDL at 0, decompression	Critical alarm. TTS replaces the NDL and the first stop appears. Ascend to the stop, wait for its time to end, and follow all stops, then the safety stop.
		 *First stop: 3 minutes at 6 m*
8	Stop violated or skipped	Critical alarm. You left a DECO stop before its time ended, or you passed the stop depth without stopping. The stop line changes to DIVE @6 m (DIVE @20 ft) and blinks until you reach that depth, and the message DECO VIOLATION RISK OF DCS replaces the rolling screens. Go back to the depth shown.
		 *Descend demand shown*  *Blinking items hidden*

Table 24 Warnings and alarms during the dive

Skipping the safety stop does not start an alarm. The safety stop is optional for a non-decompression dive but highly recommended (see 8.6).

DANGER

If you cannot follow a decompression stop because you are low on gas or have an emergency, your safety comes first: ascend and follow your emergency procedures. After a violated stop, do not dive for 48 hours and do not fly for 48 hours. Get medical help at once if you have symptoms of decompression sickness (see 8.7).

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11.3 Battery alarms

The battery gives notice before the dive and an alarm during it:

- Before and during the dive: when the battery is low, a blinking empty-battery symbol shows on the AR display and the LED blinks orange. This is a critical alarm. The device has about 45 minutes of reserve left. End the dive: ascend, make any stops the device shows, and use your backup computer.
- When the battery reserve runs out, the device switches off without further warning.

11.4 Start-up checks and error codes

Every time the device starts, it performs diagnostic checks for all its systems and sensors. This includes the automatic start at about 1 m (3 ft) when you begin a dive. If the device finds an error, the LED is solid orange, and the display shows a message with the error code (while on land). The message gives a hex number and the name of the part that is affected. Table 25 and Table 26 list them. If the device finds more than one error, the hex number combines them. The hardware errors are classified as critical where the device is no longer functional and in non-critical where the mask if in dive mode will continue to function but with the affected system disabled and the associated function paused

The errors are in two groups.

Group 1: errors that stop the dive. The device cannot give you safe dive Information. Do not dive.

Part	What it does	What you lose	Code
Battery gauge	Measures the battery level	Battery level and the battery alarms	0x00000040
Power supplies	Power for the device	The device cannot work	0x00001000
Settings memory	Keeps your settings	Your settings	0x00000800
Depth sensor	Measures depth	Depth, NDL and all dive Information	0x00000004
Surface pressure reference	Sets the pressure at the surface	Depth and NDL	0x00000100
Motion sensor	Detects motion of the device	Dive detection and motion data	0x00000002
BLE wireless	Connects to the app	The connection to the app	0x00000400 and 0x00008000
Internal file system	Stores files in the device	The device cannot work	0x00010000
System tasks	Runs the device software	The device cannot work	0x00000200

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Part	What it does	What you lose	Code
Internal connections	Connect the parts inside the device	The device cannot work	0x00002000 and 0x00020000

Table 25 Group 1 errors: do not dive

Group 2: errors that switch off one function. The device keeps working, but the function in Table 25 is not available. The LED stays solid orange. If this happens during a dive, start your ascend according to your emergency procedures and training using your back-up equipment.

Part	What it does	What you lose	Code
Vital-sign sensor	Measures your pulse	The vital signs (Chapter 9)	0x00000001
Compass	Measures the heading	The compass and the heading mark	0x00000020
Ambient light sensor	Measures the light around you	The automatic dimming of the display	0x00000010
Auxiliary pressure sensor	Measures the pressure inside the device	The equalization indicator	0x00000008
NB-IoT modem	Connects to the mobile network	Mobile network functions	0x00040000
Dive log memory	Stores the dive log	Recording of the dive log	0x00080000
Auxiliary connections	Control the modem and some sensors	The same functions as above	0x00100000

Table 26 Group 2 errors: one function is off

If the device is turned on, the AR display is blank and the LED has turned orange, do not dive, the AR display is in fault condition.

What to do about the other errors:

- With any error: write down the code and the respective message and send them to divePRO support. You cannot repair the error yourself.
- During a dive, with a Group 1 error: end the dive. Ascend using your back up dive computer.
- If the AR display is blank during a dive, knock to turn it on (the triple knock by default). If it stays blank, end the dive and use your backup dive computer.

The vital sign indications are not part of your safety. If the sensor has no contact with your skin, the values disappear and start again from 0 when contact returns (see 9.3).

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WARNING

If you are in doubt about any reading or any behavior of the device, switch to your backup instruments and end the dive.

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12 Dive-day walkthrough

12.1 The evening before

Prepare the device the evening before, so that nothing is left for the dive site.

- Charge the device fully. A full charge gives about 10 hours of diving.
- Open the divePRO Cloud app and install any pending update.
- Synchronize your last dives, so that the memory of the device is cleared (see 8.10).
- Check in the app that your settings are correct for the next dive: units, rolling screens and the functions of the knocks, as well as dive configuration settings (see 6.5).
- Check that the resting heart rate and blood pressure in the app seem logical (see 9.2).
- Clean and dry the lens of the device.

12.2 Before entering the water

Do these steps at the dive site, before you enter the water.

- Analyze your gas. In the app, if using NITROX enter the oxygen percentage you measured (see 8.3).
- Set the dive mode and the conservatism level in the divePRO Cloud app (see 8.1 and 8.2). You cannot change them during the dive.
- Apply the divePRO antifog spray.
- Put the device on and fit it correctly. Check that it seals.
- Turn the device on with a triple knock and keep it still for 10 seconds, so that the sensor can calibrate (see 9.2). If you wait more than 25 minutes without diving or with the device idle, the device turns off again. Knock three times to turn it on.
- Look at the AR display. Check the battery symbol, the brightness and the position (see 7.13). Check that depth shows 0.0 m, the NDL shows 99 and the gas is the one you set.
- Check that your heart rate is visible. If a value shows 0, wait for a few seconds until the sensor has a valid reading.
- Watch the GNSS icon. It blinks while the device searches and stays on when it has a fix (see 7.9 and 10.2).
- Do a buddy check and check your backup instruments.

> **WARNING**
> You are responsible for your settings. A wrong gas, a wrong dive mode or a wrong conservatism level gives wrong decompression Information and increases the risk of decompression sickness.

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12.3 Entry and descent

Enter the water and take a few calm breaths. If not already working, the device starts the dive by itself when you descend below 1 m (3 ft)

- Watch the equalization indicator. Equalize your ears and your device as soon as the dot starts to grow and well before your ears start to feel a pressure difference (see 7.8).
- Watch your depth and the ascent rate. Keep your decent under control.
- Use the buoyancy indicator to hold your depth (see 7.8).

12.4 At depth

In the horizontally middle section of the display, you always see depth, dive time, NDL, gas, ascent rate, buoyancy and equalization. Look at them regularly.

- Check the NDL and the nitrogen bar often. Plan to start your ascent with time to spare (see 8.4).
- Knock once to roll the screens and see your vitals (see 0).
- Knock twice to turn the compass on and mark a heading if you have set it up (see 10.3).
- If something blinks, find out what it is (see Chapter 11).

12.5 Ascent and safety stop

- Ascend slower than 9 m/min (26 ft/min). One arrow means that you are doing well. Two or three arrows mean that you must slow down (see 8.5).
- Between 6.5 m and 3 m (21 ft and 10 ft), stay for the 3-minute safety stop (see 8.6).
- Stay at the stop until the timer shows 0:00 and then ascend to the surface slowly.

12.6 Exit and surface interval

When you reach the surface, the surface screen takes the place of the rolling screens. It shows the surface time (SF), the no-fly time (NFT) and the saturation (SAT). The device records your exit position when it has a fix (see 10.2).

- Do not fly until the no-fly time is 0 (see 8.9).
- If DO NOT DIVE RISK OF DCS flashes, do not dive for 48 hours (see 8.7).
- You can leave the device on or turn it off. The surface timer and the saturation keep counting either way (see 6.4).

12.7 After the dive

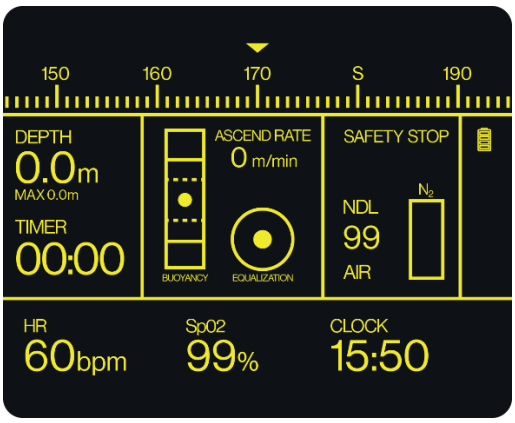
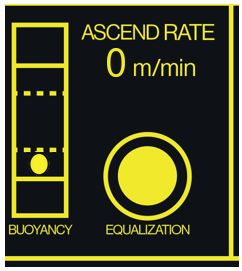
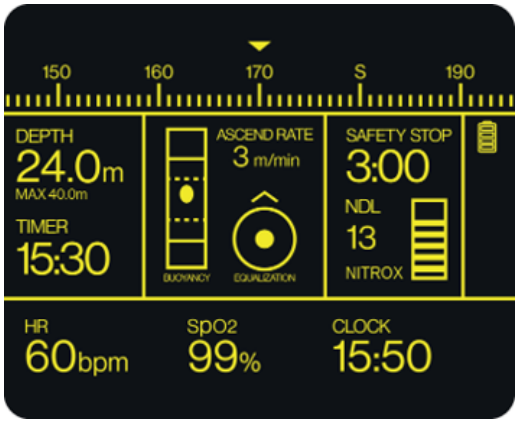
- Rinse the device with fresh water and dry it (see 15.1).
- Charge the device if you plan to dive again soon.
- Synchronize your dive with the divePRO Cloud app. Check the no-fly time on your phone (see 8.9 and 8.10).
- You can find your dive info on divePRO Cloud app (Activity tab).

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12.8 Worked example: a recreational dive

Table 27 follows one recreational dive from the surface to the surface. The values in the pictures are examples.

Phase	What you see	Picture
1	At the surface, before the dive	Depth 0.0 m, NDL 99, empty nitrogen bar. Check battery, gas and heart rate.
		 *Surface, before the dive*
2	Descent	The depth grows. Equalize when the dot in the equalization circle starts to grow.
		 *Equalization: small dot*
3	At depth	Depth, dive time, NDL and the nitrogen bar show the dive. The compass is on.
		 *At depth*

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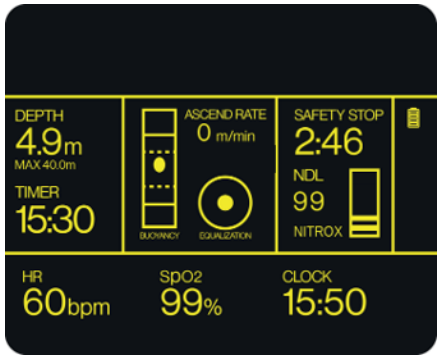
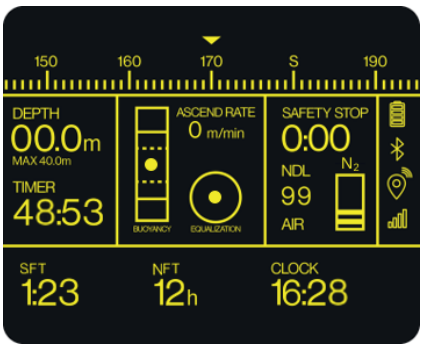
Phase	What you see	Picture
4	NDL running low	In the last 5 minutes of NDL, the NDL value blinks. Start your ascent.
		 *NDL blinking*
5	Ascent	One arrow shows an ascent slower than 8 m/min.
		 *One arrow*
6	Safety stop	The 3-minute countdown runs between 6.5 m and 3 m.
		 *Safety stop*
7	At the surface, after the dive	The surface screen shows SF, NFT and SAT. The depth is 0, MAX is the value of the dive, and the timer keeps the value of the dive.
		 *Surface screen after the dive*

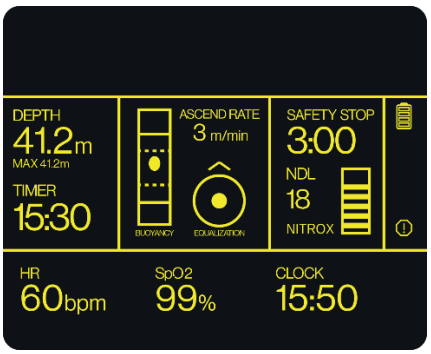
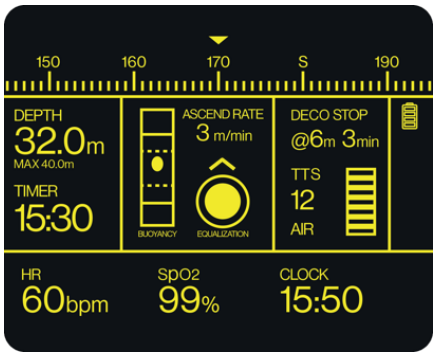
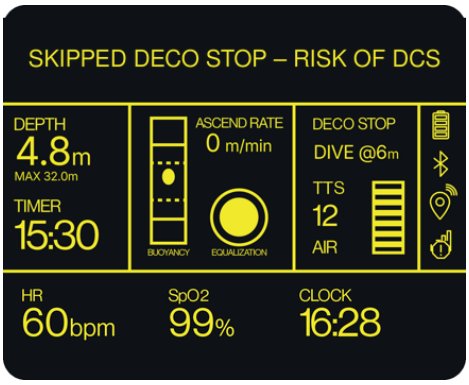
Table 27 A recreational dive

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12.9 Worked example: a dive that goes into deco mode

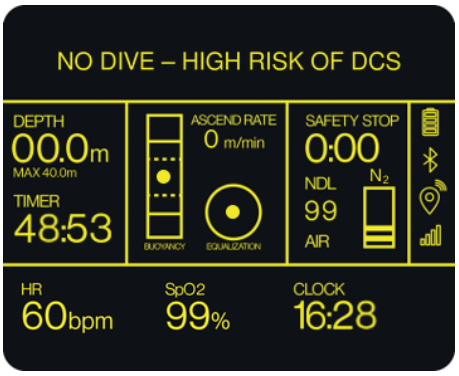
This example shows what you see if something goes wrong. It is not a plan. Do not plan decompression dives with this device (see 8.7).

Phase	What you see	Picture
1	Beyond 40 m (130 ft)	The MAX depth value blinks with the warning icon, and the LED blinks orange. Ascend.
		 *MAX depth and warning icon*
2	NDL reaches 0	TTS replaces the NDL, and the first stop appears. Ascend to the stop depth.
		 *First stop: 3 minutes at 6 m*
3	A stop is skipped	The stop line changes to DIVE @6 m and blinks. Go back to the depth shown and wait for the stop to clear.
		 *Descend demand*

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Phase	What you see	Picture
4	After the dive	DO NOT DIVE RISK OF DCS flashes for 48 hours, and the no-fly time is 48 hours. Watch out for symptoms of decompression sickness (see 8.7).



DO NOT DIVE, RISK OF DCS

Table 28 A dive that goes into deco mode

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13 Settings reference

13.1 How settings work

The device has no menu. You make every setting in the divePRO Cloud app, and the app sends it to the device over BLE wireless. The device keeps its settings and works without the phone.

Some settings affect your safety. You can change them only in the app and never during a dive. Table 29 marks them.

> **WARNING**
> You are responsible for your settings. Check all the settings in Table 29 before every dive. The wrong gas, a wrong dive mode, gives wrong dive Information and increases the risk of decompression sickness.

13.2 All settings

Setting	What it does	Options (default)	Where in the app
Units	Shows depth, temperature and speed in metric or imperial units	Metric or imperial	**More → Settings → Units**
Dive mode	Dive computer mode or gauge mode (see 8.1 and 8.8). Cannot be changed during a dive.	Dive computer or gauge	**Device Settings → Dive Configuration → Mode**
Gas mixture	The gas for the dive (see 8.3). One gas per dive. Cannot be changed during a dive. The setting is visible only in recreational mode, not in gauge mode.	Air or nitrox, 21 % to 50 % oxygen. It is only visible if enriched gas is selected	**Device Settings → Dive Configuration → Gas Mixture**
Conservatism	How much margin the decompression model keeps (see 8.2). Cannot be changed during a dive.	LOW, MEDIUM (default) or HIGH. The app shows the gradient factors in a tool tip.	**Device Settings → Dive Configuration → Conservatism**
Water type	The water in which you dive (see 8.1). Cannot be changed during a dive.	Salt water, fresh water or standard water	**Device Settings → Dive Configuration → Salinity**

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Setting	What it does	Options (default)	Where in the app
Certification depth	The depth at which the MAX depth value blinks as a warning (see 8.1). The default comes from your certificate: under More, Dive Certifications you can add a certificate and set its depth or tap an existing certificate and edit its depth. Cannot be changed during a dive.	Depth of your certificate or custom depth (18 m, 60 ft, by default)	**Device Settings → Dive Configuration → Depth**
Brightness	The brightness at which the AR display starts at the surface. Underwater the device changes the brightness with depth and ambient light (see 7.13).	0 to 100 % (default 100 %)	**Device Settings → Display Settings → Select brightness**
Display position	Moves the display on the lens (see 7.13)	Horizontal: 2 steps of 2 pixels each way. Vertical: 1 step of 5 pixels down and 2 steps up.	**Device Settings → Display Settings → Display Position**
Rolling rows	Which rows roll at the bottom of the AR display, and in what order (see 0)	Heart rate, SpO_2 and clock; blood pressure estimate and energy; heart rate variability; breathing	**Device Settings → Row Configuration**
Knocks	The function of the single, double and triple knock (see 6.5). Cannot be changed during a dive.	Display on or off, compass on or off, mark a heading, roll the screens. Default: single knock rolls the screens, double knock turns the compass on or off, triple knock turns the display on or off.	**Device Settings → Knock Controller**
Compass calibration	Calibrates the compass (see 10.1)	Calibration routine	**Device Settings → Calibrate Compass**

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Setting	What it does	Options (default)	Where in the app
Profile	Your gender, height, weight and date of birth. The device uses them for the vital-sign baselines and the energy estimate (see 9.2).	As you enter them	**More -> Account**
BP Calibration	The values the device uses to calibrate the vital-sign sensor to you (see 9.2)	Enter the values you measured with and independent device.	**Device Settings → BP Calibration**
Device off	Turns the device off (see 6.4)	Power-off button	**Device Settings → Power Off**
Find my device	Blinks the LED of the device magenta 6 times, so that you can find it among other active devices	Select the device in the app	**During BLE Wireless Scan**
Reset	Resets the device	Reset Button	**Device Settings → Reset**
Disconnect	Disconnects the device from the phone	Disconnect Button	**Device Settings → Disconnect**
Device Info	Displays the device serial number and its associated FCC IDs	Device Info Tile	**Device Settings →Device INFO**

Table 29 Settings

13.3 Limits that you cannot change

Some values are not settings. They are fixed in the device and you cannot change them:

- The PPO_2 limit of 1.4 bar (see 8.3).
- The depth alarm at 40 m (130 ft) (see 8.1).
- The ascent rate levels of 8 and 18 m/min (26 and 59 ft/min) (see 8.5).
- All remaining warning and alarm limits (see 11.1).

13.4 Settings that you cannot change during a dive

The app sends no settings to the device during a dive, because the radios are off (see 14.4). The dive mode, the gas, the conservatism level, the certification depth and the knocks are also locked in the device during a dive. Change them before the dive.

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14 Connectivity and data

14.1 BLE wireless

BLE wireless connects the device to the divePRO Cloud app on your phone. The app uses it to:

- send your settings to the device
- download your dives from the device
- install firmware updates
- show the state of the device.

To connect the device, open the app, choose Add a Device and hold the phone near the device. The app shows the serial number of the device.

The device works without the phone. You do not need the phone during the drive. Leave it at the surface.

14.2 Satellite positioning

The device has a satellite positioning receiver (GNSS). It finds your position at the surface, and records where you enter and leave the water. Underwater the receiver is off.

The GNSS icon blinks while the device searches and stays on when it has a fix.

14.3 Cellular connection

The device has an NB-IoT modem that connects to the mobile network at the surface, without a smartphone. The device uses it to set/update its date and time. The device does not send live data.

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14.4 When the radios are on and off

BLE wireless, satellite positioning and the mobile network are all off during a dive. They work at the surface, before and after the dive. The icons on the right of the AR display show the state of each connection.

14.5 Syncing dives

Sync your dives with the app after every diving day. Open the app near the device. The app loads the dives that are on the device and saves them in your account. Syncing can take some time when there are many dives. After syncing with the app, dives on the device are erased.

14.6 Storage on the device

The device stores many dives, so you can dive for several days before you must sync. When the memory is nearly full, you need to sync the dives soon. When the memory is full and you have not synced, the device overwrites the oldest dives with new ones. Sync regularly so that you do not lose your data.

14.7 Firmware updates

divePRO releases firmware updates that improve device stability, accuracy and safety. Install all available firmware before diving.

- When you open the app near your device, the app checks for an update.

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- Install every available firmware update before you dive.
- Before an update, the app syncs all your dives. You cannot skip this step, so that no dive is lost if the update fails.
- Charge the device to at least 20 % before you update it. Keep the phone close to the device during the update.

WARNING

Failure to install available firmware before diving can cause the device to malfunction under certain conditions. divePRO is not liable for damage, injury or malfunction resulting from failure to install available firmware.

14.8 Privacy and data

The device and the app handle your dive logs, your vital-sign data and your position tracks. You decide which data they use. In the app, open Account, then Manage Account. The privacy policy and the consent settings are on this screen.

The consent settings are:

- Health data consent: the device and the app sync your vital-sign data.
- Location data consent: the device and the app sync your position data.
- Device upload consent: the device uploads your dives to the app.
- Device improvement consent: the app downloads the event and error log files of your device, so that divePRO can improve the device.
- App improvement consent: the app collects its logs, so that divePRO can improve the app.
- Share data with instructors: you authorize an instructor to see your dive data when the instructor requests it.

The privacy policy explains how divePRO collects, uses and protects your data, and how you can use your rights under the GDPR.

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Part C: Care, Support and Compliance

15 Care, cleaning, storage and transport

This chapter explains how to clean, store and transport divePRO SCUBA. After every dive, a few minutes of care can keep the seals, the sensors and the charging contacts in good condition.

15.1 After every dive

Do this after every dive, and especially after a dive in salt water.

- Synchronize the device with the divePRO Cloud app and switch the device off.
- Rinse with fresh water, either under running water or by soaking it in ambient temperature water.
- Occasionally, wash the device with mild soap to prevent salt build-up. Rinse all the soap off with fresh water.
- Let the device dry in the shade. Do not dry it in direct sunlight or with a heat source.
- When dry, store the device in the carrying case.

Between dives. Keep the device out of direct sunlight. It is suggested to store it in the carrying case.

Sunscreen, insect repellent and lotions. They can damage the seals and the plastic parts. Keep them away from the device. If they touch it, rinse the device thoroughly with fresh water and let it dry. Sunscreen on the vitals sensor can also disturb the vital-sign readings. To clean the sensor window, wipe it gently with a soft cloth dampened with fresh water.

> **CAUTION**
> Never clean the device with alcohol, solvents, aerosol sprays, toothpaste or abrasive agents. They can damage the seals or the plastic parts, and water can then enter the sealed electronics.

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15.2 Charging contacts

The charging contacts are on the left side of the device. They are exposed, so salt and dirt can collect on them.

- Rinse the contacts with fresh water after every dive and let them dry completely.
- Before you charge, check that the contacts and the area around them are completely dry and free of salt and debris.
- If rinsing does not remove salt, deposits or discoloration from the contacts, pat them with a soft cloth.
- If the device does not charge, stop charging and contact divePRO.
- Use only the divePRO charging cable. The cable is not waterproof. Keep it dry.
- The cable connector is magnetic and can pick up metal particles. Before you charge, check the connector and remove any metal particles.

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CAUTION

Do not charge the device when the charging contacts are wet or covered with salt or debris. Moisture on the contacts can cause a short circuit and damage the device.

15.3 Lens and display optics

The lens is made of tempered glass with a semi-reflective coating. The AR display is projected onto the inside of the lens. Dirt, salt and fog on the lens or on the glass of the AR display make the display harder to read.

- Clean the lens with fresh water. Salt build-up on the lens, the projector glass and the sensors is removed by rinsing.
- To dry the lens, pat it gently with a soft cloth. Do not rub or scrub the lens. This can damage the lens.
- Apart from the anti-fog solution, do not apply any chemicals to the lens or to the glass of the AR display. Apply the anti-fog solution following the specified procedure before every dive and rinse with water.
- Do not use the device if the lens or frame is cracked or deeply scratched.

Strap, buckles and strap cover. Rinse them with fresh water and let them dry. The strap and the neoprene strap cover are consumable parts. Never put small objects into the depth sensor port.

15.4 Storage

- It is strongly recommended to store the device in the carrying case, in a cool, dry, dust-free place.
- Keep the device out of direct sunlight and away from UV light and radiant heat. The lens can concentrate sunlight and permanently damage the AR display inside the device.
- Never leave the device in a closed car or on a dashboard. Heat can damage the battery.

Table 30 shows the temperature ranges for the device.

Condition	Temperature range
Use of the device (operating)	0°C to 40°C (32°F to 104°F)
Short term, a few hours (for example during transport)	–10°C to 50°C (14°F to 122°F)
Long-term storage	5°C to 20°C (41°F to 68°F)

Table 30 Temperature ranges

Battery during storage. The device uses a small amount of power even when it is switched off. If the battery discharges completely, the device may not respond until you charge it. Before you store the device for a long time, fully charge it.

INFO

Cold water reduces the battery performance. Charge the device fully before diving in cold water.

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15.5 Travel and flying

Packing. Carry the device in its carrying case. Switch the device off before you pack it, so that it cannot switch on by accident.

Flying with the device. divePRO SCUBA contains a sealed lithium-polymer battery that you cannot remove. The rules for lithium batteries on aircraft are set by aviation authorities and airlines, and they change from time to time. Before you travel, check the current IATA rules and the policy of your airline.

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16 Service life, servicing and end of life

This chapter tells you when to stop using the device, how to check it before every dive, how to get service and support, what the warranty covers and how to dispose of the device. Stop-use criteria

Stop using the device if any of the following occur:

- Damage to safety-critical parts that cannot be replaced (silicone frame, glass, sensors — cracks, cuts, missing pieces).
- Material deterioration from prolonged sunlight exposure or heavy bending.
- The product no longer appears safe or reliable.
- The product no longer meets applicable technical standards (for example due to regulatory change or incompatibility with other products).
- The product's history of use is unknown (for example a second-hand unit).
- The device malfunctioned during a dive. Do not dive with it again until the problem is resolved. Report the problem to divePRO.

WARNING

Do not dive with a device that meets any of these criteria. A damaged lens, frame or skirt can break or leak during a dive. Report any problem to divePRO.

16.1 Inspection before use

Inspect the device before every dive. The inspection takes about a minute.

1. **Skirt seal.** Do not use the strap. Press the device against your face and inhale gently through your nose to create a vacuum. The device should stay in place when you hold your breath. Facial hair or head hair can affect the seal.
2. **Strap.** Pull the strap with a force of approximately 3kg (6.5lb) to confirm that it is intact.
3. **Buckles.** Move each buckle back and forth to confirm that it works smoothly.
4. **Visual check.** Check that the skirt (3 in Figure 1), the lens (2), the sensors (4 and 7), the charging contacts (6) and the strap show no damage, such as cracks, cuts or deep scratches.

If any check fails, do not dive. Contact divePRO.

INFO

This inspection covers the condition of the device. Battery, firmware, settings, display and equipment checks are described in section 5.4.

WARNING

Do not dive with a device that fails an inspection. A device that leaks, a strap that fails or a damaged lens can put you at risk during a dive.

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16.2 Servicing and support

No user-serviceable parts. The device is sealed. Only divePRO or a service center authorized by divePRO may repair it.

> **CAUTION**
> Do not open the sealed electronics or try to remove the battery. Do not try to repair the device yourself. This can damage the device permanently and voids the warranty.

Service and calibration. The device requires service every 2 years. Contact divePRO or a service center authorized by divePRO to guide you about the service process. The device may require calibration only when you face an unusual measurement. Do not dive using the device until the problem is resolved. Contact divePRO or a service center authorized by divePRO to guide you about the calibration process.

Consumable parts. The strap and the neoprene strap cover are consumable parts. To get a replacement, contact divePRO.

Contacting divePRO. Contact divePRO through the divePRO Cloud app or on the website https://divepro.gr/contact-us. Have the serial number of your device ready. If the device showed an error code, note it (see section 11.4).

16.3 End of life

At the end of its life, do not throw the device away with household waste. The device is electrical and electronic equipment (WEEE). Dispose of it according to local laws and regulations and recycle it at an appropriate collection facility.

The device contains a sealed lithium-polymer battery. Do not remove the battery and do not take the device apart. Do not puncture or burn the device (see section 4.7).

Before you dispose of the device or pass it on, synchronize it with the divePRO Cloud app. When the synchronization is complete, all dive data on the device are erased.

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17 Regulatory Compliance

17.1 European Union

The device conforms with the following EU Directives and Regulations:

- PPE Category I. This device is classified as Personal Protective Equipment (PPE) Category I under EU Regulation 2016/425.
- Directive 2014/53/EU of the European Parliament and of the Council on radio equipment (RED)
- Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances (RoHS), as amended by Directive (EU) 2017/2102

The device complies with the relevant requirements of the following European Standards (EN) for diving equipment:

EN 16805:2015 – Diving equipment – Diving device – Requirements and test methods

EN 13319:2000 – Diving accessories – Depth gauges and combined depth and time measuring devices – Functional and safety requirements, test methods

EN IEC 62368-1:2020+A11:2020 – Audio/video, Information and communication technology equipment – Part 1: Safety requirements

EN 62311:2008 – Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz)

EN IEC 63000:2018 – Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

ETSI EN 300 328 V2.2.2 - Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band

ELOT EN 55032 E2:2015 + A11:2020 + A1:2020 - Electromagnetic compatibility of multimedia equipment - Emission Requirements

ELOT EN 55035 E1:2017 +A11:2020 - Electromagnetic compatibility of multimedia equipment - Immunity Requirements

ETSI EN 301 489-1 v2.2.3 - Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

ETSI EN 301 489-17 v3.3.1 - Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems

ETSI EN 301 489-19 v2.2.1 - Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 19: Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications and GNSS receivers operating in the RNSS band providing positioning, navigation, and timing data

ETSI EN 301 489-52 V1.3.1 - Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment

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17.2 USA-Federal Communications Commission (FCC)

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. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and may cause harmful interference in radio communications if not installed and used in accordance with the instructions. Any changes or modifications to the device could void your authority to operate the equipment.

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18 Legal and Privacy Information

18.1 Terms and conditions

Use of the divePRO SCUBA device, its mobile application and its cloud services are subject to the divePRO Terms and Conditions. By connecting the device with your phone or creating an account, you agree to those terms. Read them at https://divepro.gr/terms-and-conditions.

18.2 Warranty

divePRO SCUBA is covered by a Limited Warranty. For complete terms, conditions and exclusions — including details on commercial use and shipping — please visit www.divepro.gr/warranty.

The warranty does not cover:

- water that enters the device because of improper maintenance;
- damage caused by opening the device or by trying to remove the battery;
- repairs or changes made by anyone other than divePRO or a service center authorized by divePRO;
- damage caused by charging the device when the charging contacts are wet or covered with salt or debris (see section 15.2);
- normal wear of the strap and the neoprene strap cover, which are consumable parts.

18.3 Data privacy

This device collects technical telemetry, dive logs and physiological data. For detailed Information on how we collect, process and protect your personal data and how to exercise your GDPR rights, read the Privacy Policy at Privacy Policy

For California users:

ccpa-privacy-policy | divepro Website

Your data protection rights

Your Data Protection Rights

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19 TECHNICAL SPECIFICATIONS

DISPLAY

Type	Augmented-Reality Display
Layout	Three tiers — top status, fixed middle dive panel, bottom rolling screens
Brightness	0 – 100 %, app-configurable

SENSORS

Depth Rating	40 m / 130 ft (EN 13319)
Pressure Tested	20 atm
Pressure Sensor Calibration	30 bar / 435 psi
Inside-mask pressure	For equalization indicator
Magnetometer	Tilt-compensated 3-axis compass
IMU	3-axis accelerometer + gyroscope
Water temperature	External, in-skirt
Breath temperature	Inside the mask
Heart rate / SpO_2 / HRV	Optical PPG
Respiratory rate	Derived from PPG

DIVING ALGORITHM

Model	Bühlmann ZHL-16C with Gradient Factors
Conservatism	Low 35/75 Med 40/85 High 45/95
Modes	Recreational, Gauge
Gas support	AIR (21 %), Enriched 21 – 50 % O_2
MOD calculation	Live, at 1.4 bar PPO_2
Max depth	40 m / 130 ft
Default ascent rate ceiling	18 $m \cdot min^{-1}$

BATTERY & POWER

Battery	LiPo, rechargeable, non-user replaceable 3.8V, 330mAh
Charging	Magnetic contact, USB-C cable supplied
Charge time	≈ 90 min, 0 – 100 %
Dive endurance	Up to 10 dive hours per charge
Standby	Up to 45 days

MECHANICAL & ENVIRONMENTAL

Skirt	High-quality soft liquid silicone
Lens	Tempered Glass, coated
Strap	Adjustable, replaceable
Operating temp.	0 – 40 °C
Ingress	IPX8 40 m / 130 ft
Weight	Approx. 275 g

CONNECTIVITY

Wireless	BLE 5.x, low power
Cellular	NB-IoT modem
GNSS	Multi-constellation (GPS, GLONASS, Galileo, BeiDou)

COMPLIANCE

Classification	PPE Category I (EU 2016/425)
EN 16805 / 13319	Diving masks · depth & time
RED	Directive 2014/53/EU
FCC	Part 15 Class B
Environmental	RoHS REACH

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