Cal. 7K52

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You are now the proud owner of a SEIKO Analogue Quartz Watch Cal. 7K52. For best results, please read the instructions in this booklet carefully before using your SEIKO Analogue Quartz Watch. Please keep this manual handy for ready reference.

Vous voici l'heureux propriétaire d'une montre quartz analogique SEIKO Cal. 7K52. Pour obtenir d'excellentes performances de cet article SEIKO, veuillez lire attentivement cette brochure que vous conserverez pour toute référence ultérieure.

Enhorabuena por su adquisición de un reloj SEIKO analógico de cuarzo Cal. 7K52. Para óptimo resultado, lea detenidamente las instrucciones de este folleto antes de usar el reloj. Guarde este manual para consulta posterior.

Sie sind jetzt Besitzer einer SEIKO Analog-Quarzuhr Kal. 7K52. Bitte lesen Sie diese Bedienungsanleitung vor Verwendung der Uhr sorgfältig durch und heben Sie sie gut auf.

Siete ora in possesso di un orologio SEIKO Analogico al Quarzo Cal. 7K52. Per ottenere i migliori possibili risultati dal Vostro orologio, leggere attentamente le istruzioni di questo manuale prima di utilizzare il Vostro orologio SEIKO analogico al quarzo. Conservare poi il manuale stesso per oni qualsiasi eventuale futuro riferimento.

Você pode sentir-se orgulhoso de possuir um Relógio SEIKO Quartz Análogo Cal. 7K52. Para obter os melhores resultados, leia atentamente as instruções contidas neste opúsculo antes de usar o seu Relógio SEIKO Quartz Análogo. Queira conservar este manual para referências futuras.

6M25/6M26



The SEIKO SCUBA DIVER'S Cal. 7K52 is intended for use in an inherently hazardous form of recreation. Therefore, it is absolutely essential that you observe strictly all instructions for the use and maintenance of the watch set forth in this booklet.

First of all, this watch is for use by adults only in recreational (no-decompression) diving in water having a specific gravity of 1.025 (sea water), having a temperature range of 0° C to 40° C, and is not for decompression diving, saturation diving or diving at altitudes (diving in a high mountain lake, etc.). Unless you have undergone scuba training with a qualified instructor, you can neither fully appreciate the concept of no-decompression limits nor properly employ the watch.

DO NOT ATTEMPT TO DIVE USING THE WATCH UNLESS YOU HAVE BEEN PROPERLY TRAINED IN SCUBA DIVING, POSSESS THE REQUISITE EXPERIENCE AND SKILL TO DIVE SAFELY. HAVE THOROUGHLY FAMILIARIZED YOURSELF WITH THE OPERATION AND MAINTENANCE OF THE WATCH, AND HAVE TESTED ALL WATCH FUNCTIONS PRIOR TO EACH DIVE. In addition, sharp fluctuations in atmospheric pressure and aquatic environments may affect the performance of the watch. When making a dive, use other diving instruments such as dive computers together with this watch for safety's sake. Finally, all of the diving measurements made by the watch and warning functions of the watch, outlined herein, are to serve as general guidelines only, and individual reactions will differ from person to person.

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☆ For the care of your watch, see "TO PRESERVE THE QUALITY OF YOUR WATCH" in the attached Worldwide Guarantee and Instruction Booklet.

SEIKO CAL. 7K52

DIVING MEASUREMENT

- Full automatic measurement of diving data
 Current depth, maximum depth, diving time and time submerged
- Recording of log data
 Maximum depth, average depth, diving time and time submerged for the last two dives
- Warning functions
 - Rapid ascent warning
 - Extra measurement range warning
 - · Abnormal measurement warning
- Rotating bezel

Can measure elapsed time such as diving time, surface interval, etc.

Battery life indicator

SINGLE-TIME ALARM

• Can be set to ring only once at a designated time within the coming 12 hours.

TIME/CALENDAR

Hour, minute and small second hands and date

a: Screwed-in position

b: Normal position

c: First click

d: Second click

English

HOW TO USE THE SCREW LOCK TYPE CROWN

 To unscrew the crown: Turn it counterclockwise.



To screw in the crown:
 With the crown at normal position, turn it clockwise while pressing it.

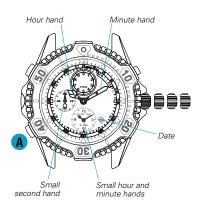




WARNING

- While you are underwater, never unscrew the crown or pull it out.
- Do not pull out the crown to the first click while the watch is measuring the depth and for 10 minutes after diving. Otherwise, the depth measurement is stopped, and false data will be recorded in memory as log data.

TIME/CALENDAR SETTING



CROWN

Unscrew.

Pull out to first click and turn counterclockwise to set the date.

Pull out to second click when small second hand is at the "0" position.

Set hour and minute hands.



Press to set small hour and minute hands to the time set above.



Push in in accordance with a time signal.

Screw in completely.

ADJUSTING THE HAND POSITION BEFORE DIVING

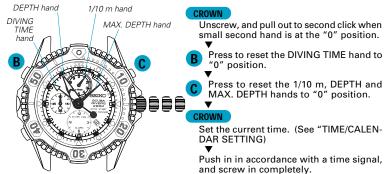
- Press repeatedly until you hear a long beep.
 - With each press of button B, the indication of the diving hands changes as follows:

 Log data of the last dive (Beep, beep)

 Log data of the dive before last (A long beep)

 Diving hands at "0" position

 (Beep)
- If any of the hands does not return to "0" position, follow the procedure below.



DIVING MEASUREMENT

 The watch measures the current depth, maximum depth, diving time and time submerged, and indicates them with the four hands for diving measurement and the small hands at the 6 o'clock position.

HOW TO READ THE MEASUREMENTS

 Current depth: Indicated by DEPTH and 1/10 m hands in 0.1 m increments from 1.6 m up to 55.0 m. (Ex. 12.5 m)

 Maximum depth: Indicated by MAX. DEPTH hand in 0.5 m increments from 1.5 m up

to 55.0 m. (Ex. 20.5 m)

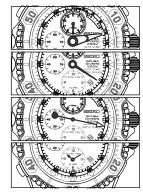
• Diving time: Indicated by DIVING TIME hand up to

12 hours.

(Ex. 17 minutes)

• Time submerged: Indicated by small hands at the 6

o'clock position. (Ex. 10:10)



HOW TO USE THE DIVING FUNCTION

Before diving, check the hands for diving measurements.

Press button B repeatedly.

Log data of Diving hands > at "0" Log data of the > the dive position last dive hefore last

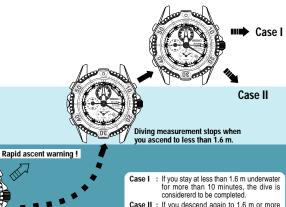
0.0 m



1.6 m

Diving measurement starts when you descend to 1.6 m or more.

Never operate the crown while the measurement is in progress.



Case II: If you descend again to 1.6 m or more underwater before 10 minutes have elapsed, the two dives are considered inseparable, and the measurement is resumed.

Extra measurement range warning!

- Before starting a dive, be sure to check that the hands for diving measurement are reset to "0" position.
 If not, reset them following the procedure in "ADJUSTING THE HAND POSITION BEFORE DIVING".
- When you ascend to a depth less than 1.6 m underwater and the watch stops measuring the depth, the DEPTH and 1/10 m hands indicate "0.0 m".
- If you descend again to a depth of 1.6 m or more underwater before 10 minutes have elapsed, the time elapsed after the depth measurement is stopped is added to the measured diving time.
- For 10 minutes after a dive, all the three buttons will not work.
- After 10 minutes have elapsed following a dive, recall of log data is made possible by pressing button
 B.

WARNING FUNCTION FOR DIVING

RAPID ASCENT WARNING

The watch monitors the change of depth at 10 second intervals and gives a warning if
the diver ascends more than 3 m in 10 seconds, that is, at a rate of more than 18 m per
minute.

Warning sound beeps intermittently for about 10 seconds and 1/10 m hand moves back and forth.



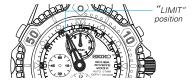


CAUTION

The rapid ascent warning is given whenever the diver's ascent rate is beyond the specified criterion. The extent of hazardousness, however, varies depending on the water temperature and the diver's physical condition. Please note that the warning serves only as a guideline for your diving activities.

EXTRA MEASUREMENT RANGE WARNING (LIMIT)

- If the measured depth exceeds 55.0 m, the DEPTH and MAX. DEPTH hands point to the 56-minute position, "LIMIT".
 - * If the diver returns to a depth of 55.0 m or less, the DEPTH hand indicates the depth properly.



ABNORMAL MEASUREMENT / MEASUREMENT HALT WARNING

 If the watch senses an abnormality in depth measurement, the diving measurement is automatically halted. The DEPTH hand points to the 58-minute position and the MAX. DEPTH hand points to 0 m.



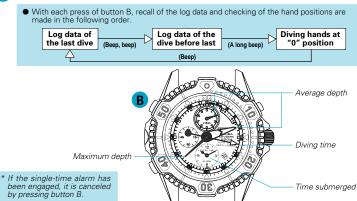


CAUTION

If the watch gives the above warning, do not continue to use the watch for diving measurement.

RECALL OF LOG DATA

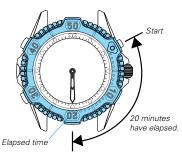
- The watch retains data for two dives, namely, time submerged, diving time, maximum depth and average depth.
 - * Log data cannot be recalled while diving and for 10 minutes after diving.
- B Press to recall the log data.



ROTATING BEZEL

- The rotating bezel can show up to 60 minutes of elapsed time. It is useful for measuring the surface interval.
 - Turn the rotating bezel to align its " image mark with the minute hand.
 - 50

2 Read the number on the rotating bezel that the minute hand points to.

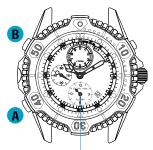


^{*} The rotating bezel turns only counterclockwise for safety's sake.

SINGLE-TIME ALARM

- The alarm can be set to ring once within the coming 12 hours.
- While on the surface, the small hands at the 6 o'clock position serve as alarm hands.
 - * While you are at a depth of 1.6 m or more underwater and for 10 minutes after a dive, the single-time alarm function cannot be used.

ALARM TIME SETTING



Small hour and minute hands

Ex.: Alarm time is set at "10:30".

Press to reset the hands for diving measurement to "0" position.

•

A Set the alarm time.

* At the designated time, the alarm rings for 20 seconds and is automatically disengaged.

 To stop the alarm manually: Press any of the buttons.

To cancel the alarm:

Press button B to recall the log data, or press and hold button A until the small hands indicate the current time.

PRECAUTIONS FOR DIVING

BEFORE DIVING

- Check that:
 - the watch operates normally.
 - · the crown is locked tightly in place.
 - · there are no visible cracks in the crystal or the watch band.
 - the strap or bracelet is securely fastened to the watch case.
 - · the buckle keeps the strap or bracelet firmly secured to the wrist.
 - the time and date are properly indicated.
 - · the small second hand is moving at one-second intervals.
 - · the log data of the previous two dives is recalled properly.
 - all the hands for diving measurement are reset to "0" position.

While the small second hand is moving at two-second intervals, or when the DEPTH hand points to the 58-minute position after all the hands are reset to "0" position, the watch will not measure the depth. In these cases, replace the battery with a new one. (See "BATTERY LIFE INDICATOR")

If there are any malfunctions, do not use the watch for diving. We recommend that you contact an AUTHORIZED SEIKO SERVICE CENTER.

- If the temperature of the water is much lower than the air temperature (for example, if the
 watch is put into water after it is left in direct sunlight for a long time), the watch may not
 measure the depth accurately. In this case, soak the watch in water for approximately 5
 minutes before starting to dive.
- If the watch is used in places where atmospheric pressure or temperature changes sharply,

or in temperatures outside the operational temperature range for depth measurement (0° C to 40° C or 32° F $\sim 104^\circ$ F), the depth measurement may be inaccurate, and depths greater than 1.6 m may be displayed even while the diver is on the surface, resulting in endless depth measurement and buttons which no longer operate. If this occurs, unscrew the crown and pull it out to the first click to manually stop the measurement.

- * Measurement details are recorded as abnormal measurement. (See "Abnormal measurement/ measurement halt warning" in "NOTES ON USING THE WATCH") After the measurement is stopped, push in the crown and screw it in completely.
- By making a new dive, the older of the two log data in memory will be erased. Before diving, therefore, it is recommended that you make a note of the stored data in your log book, etc.

WHILE DIVING

- Use the watch only within the operational temperature range for depth measurement (0° C ~ 40° C or 32° F ~ 104° F).
- Take care not to hit the watch against hard objects such as rocks.
- While you are underwater, never unscrew the crown or pull it out.
- Check that the DEPTH hand moves properly.
- While you are at a depth of 1.6 m or more underwater, the alarm will not ring so that it is not confused with the beeping sound for the rapid ascent warning.
- The depth measurement is made every second except while the DEPTH hand is moving.
- While the watch is giving the rapid ascent warning, it will not measure the depth. In some
 cases, however, the watch stops the warning momentarily to indicate the depth and then
 resumes the warning.
- Depending on the aquatic environment where the watch is used, the beeping sound for the

rapid ascent warning may or may not reach your ears.

- If you find the DEPTH hand indicating the 58-minute position while you are underwater, you should either ascend to the surface immediately or, if you choose to remain underwater, not depend on diving information provided by the watch.
- The watch measures the depth of water on the basis of seawater having a specific gravity
 of 1.025. When it is used in fresh water such as lakes, therefore, the displayed depth should
 be corrected by multiplying it by 1.025.
 - Ex. Assuming that the gravity of the lake where you are diving is 1.00 If the watch indicates 29.2 m, the actual depth is:

29 2 m x 1 025/1 00 = 30 0 m

While you are underwater, none of the buttons will work for safety's sake.

AFTER DIVING

- After making a dive, be sure to rinse the watch in fresh water, and wash out all seawater, soil, sand, etc. If dust forms between the case and rotating bezel, the pressure sensor will not function properly.
- Be sure to wash out soil, etc. sticking to the water contact sensor unit, as this will cause a
 malfunction.
- After cleaning the watch in fresh water, be sure to wipe it thoroughly dry to prevent possible rust on the case.
- If soil, sand, etc. stick in the sensor unit and cannot be washed out, take your watch to the retailer from whom the watch was purchased or an AUTHORIZED SEIKO DEALER or SERVICE CENTER.
- Be careful not to expose the watch to solvents such as alcohol and gasoline, as this may cause a malfunction of the sensors.

NOTES ON USING THE WATCH

TIME/CALENDAR SETTING

- Do not set the date between 9:00 p.m. and 1:00 a.m. Otherwise, the date may not change properly.
- Be sure to set the time hands and the small hands at the 6 o'clock position accurately to the current time as the time submerged recorded as log data is based on the time the small hands indicate.
- By pulling out the crown to the second click, the time hands stop moving, and the small hour and minute hands indicate the current time and stop. The hands for diving measurement are reset to the "0" position.
- When setting the hour hand, check that AM/PM is correctly set. The watch is so designed that the date changes once in 24 hours.
- When setting the minute hand, advance it 4 to 5 minutes ahead of the desired time and then turn it back to the exact time.
- The small hour and minute hands advance quickly if button A is kept pressed.
- It is necessary to adjust the date at the end of February and 30-day months.

ADJUSTING THE HAND POSITION BEFORE DIVING

- The hands move quickly if the respective buttons are pressed.
- The MAX. DEPTH hand moves only when it is pushed by the DEPTH hand from the clockwise direction.
- With each press, the 1/10 m hand advances by 1/4 of a graduation. When the DEPTH hand nears "0" position, the 1/10 m hand is hidden behind it. Count the number of presses of button C required to reset the 1/10 m hand to "0" before it is completely hidden.
- Do not press buttons B and C at the same time.

DIVING MEASUREMENT

How to read the measurements

- The time submerged is the time when you descend to a depth of 1.6 m or more underwater, and the diving time measurement starts at the same time.
 - The time submerged is indicated in the 12-hour indication without showing AM/PM.
- The diving time can be measured and indicated for up to 12 hours, but it is only recorded for up to 2 hours as the log data in memory.
- The DIVING TIME hand moves at 1/5-minute intervals, but the scale is graduated in minutes.
- Do not press buttons B and C at the same time.

How to use the diving function

- Even if you have never made a dive using the watch, log data of two dives is prerecorded in memory for checking purposes.
- If you start a dive without resetting the hands to "0" position, they automatically return to "0" position as the watch starts measuring and then move to indicate the depth and diving time. However, you cannot check the current depth all this while, so therefore be sure to reset the hands to "0" position before diving.

WARNING FUNCTION FOR DIVING

Rapid ascent warning

 If the diver ascends so fast that the DEPTH hand cannot move exactly in accordance with the actual change of depth, the 1/10 m hand does not move back and forth but alternately moves and stops as a warning.

Extra measurement range warning

• If a depth of more than 55.0 m is measured, the log data recorded in memory will be as follows:

- Maximum depth: The MAX. DEPTH hand indicates the 56-minute position.
- Average depth : The DEPTH hand indicates the 56-minute position.
- Time submerged and diving time are recorded as measured.

Abnormal measurement / measurement halt warning

- If the watch senses an abnormality while measuring the depth, the log data recorded in memory will be as follows:
 - Maximum depth: The MAX. DEPTH hand indicates "0" position.
 - Average depth : The DEPTH hand indicates the 58-minute position.
 - Time submerged and diving time measurements are also abnormal, and the recorded data should not be considered reliable.

RECALL OF LOG DATA

properly.

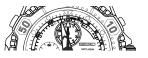
- When log data is recalled by pressing button B for the first time when 10 minutes have elapsed after diving, the data newly recorded is recalled. At this time, only the DEPTH hand moves to indicate the average depth, as the other hands are already indicating the data just obtained.
- The time submerged is indicated in the 12-hour indication without showing AM/PM.
- The time submerged is retained in memory even if a time adjustment is made.
- The watch measures the diving time for up to 12 hours, but, in recalling the log data, up to 2 hours are
 indicated. To show the time beyond 1 hour, the DIVING TIME hand makes another revolution.
- Remarks on the indication of MAX.DEPTH and DEPTH hands
- When both the MAX. DEPTH and DEPTH hands point to the 56-minute position: This indicates that a depth of more than 55.0 m is measured during the dive and that the maximum and average depths cannot be calculated. The time submerged and diving time are recorded
 - When the MAX. DEPTH and DEPTH hands point to "0" and the 58-minute positions, respectively: This indicates that the watch senses an abnormality in depth measurement during the dive. Measurement of the time submerged and diving time are also abnormal.

SINGLE-TIME ALARM

- When button B is pressed to reset the hands for diving measurement, check that the small hands at the 6 o'clock position indicate the current time.
- While you are at a depth of 1.6 m or more underwater and for 10 minutes after a dive, the single-time alarm function cannnot be used.
- The small hour and minute hands advance quickly if button A is kept pressed.
- Do not recall the log data while the alarm is engaged. Otherwise, the small hands at the 6 o'clock
 position move to indicate the time submerged and the alarm time you have set is automatically
 canceled.
- The alarm time you have set is also canceled automatically when the watch is used for diving.

BATTERY LIFE INDICATOR

- When the battery nears its end, the small second hand moves at two-second intervals instead of the normal one-second intervals. In that case, the watch will stop operating in 2 to 3 weeks. Replace the battery with a new one as soon as possible.
 - * While the small second hand is moving at two-second intervals, the watch remains accurate but the alarm will not ring.
- While the small second hand is moving at two-second intervals, do not use the watch for diving, as the watch does not measure the depth.
- When the battery nears its end, the DEPTH hand indicates the 58-minute position when button B is pressed to reset the hands for diving measurement to "0" position.
 - * When the log data is displayed, however, the DEPTH hand does not indicate the 58-minute position.



BATTERY CHANGE



The miniature battery which powers your watch should last approximately **2 years**. However, because the battery is inserted at the factory to check the function and performance of the watch, its actual life once in your possession may be less than the specified period. When the battery expires, be sure to replace it as soon as possible to prevent any malfunction. For battery replacement, we recommend that you contact an AUTHORIZED SEIKO DEALER and request **SEIKO CR2016** battery.

- * For safety's sake, the watch will also undergo a strict check at the time of battery replacement. In addition to battery replacement, water resistant quality of the watch and the depth measurement function will be checked. The gasket will be replaced with a new one if necessary. Therefore, it will take approximately 10 days before the watch is returned to you, and the checking may be made at cost.
- * The battery life may be less than 2 years if the alarm is used more than 15 seconds a day, and/or the depth measurement function more than 50 times a year, one hour per dive.
- * When the battery is replaced with a new one, or when it runs down, the log data will be erased from memory.



- Do not remove the battery from the watch.
- If it is necessary to take out the battery, keep it out of the reach of children. If a child swallows it, consult a doctor immediately.

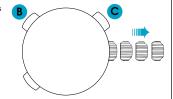


- Never short-circuit, heat or otherwise tamper with the battery, and never expose it to fire. The battery may burst, become very hot or catch fire.
- The battery is not rechargeable. Never attempt to recharge it, as this may cause battery leakage or damage to the battery.

Necessary procedure after battery change

- When the battery is replaced with a new one or when the watch hands move improperly, follow the
 procedure below. The IC is reset and then the watch operates normally.
 - * The log data stored in memory will be erased by following the procedure below.

Pull out **Crown** to the second click and press **buttons B** and **C** at the same time.



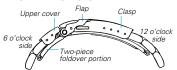
Before using the watch:

- Set the time and date.
- Press button B to recall the log data.
 The following data will be displayed.

	Diving time	Maximum depth	Average depth	Time submerged
DATA 1	15 minutes	20 m	10.0 m	Time randomly selected
DATA 2	30 minutes	40 m	20.0 m	Time of DATA 1 plus 6 hours

^{*} If the above data are not properly indicated, the watch may be out of order. Contact the retailer from whom the watch was purchased or an AUTHORIZED SEIKO DEALER.

HOW TO USE THE DIVER EXTENDER

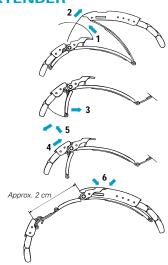


To extend the band length

- 1 Lift up the flap.
- 2 Press the button to open the clasp.
 - * Then, push the flap back to the normal position for safety's sake.
- 3 Pull the two-piece foldover portion until it clicks loose.
- 4 Slide the upper cover in the direction of the arrow, and then.
- 5 pull it up to extend the two-piece foldover portion to the full.
- 6 Close the clasp, and then, the flap.

• To change back the band length

Fold the two-piece foldover portion, and hook the upper cover on to the shaft of the flap. Then, pull the bracelet hard until the two-piece foldover portion fixed in position.



SPECIFICATIONS

	LonioAmonto		
1	Frequency of crystal oscillator	32,768 Hz (Hz = Hertz Cycles per second)	Ξ
2	Loss/gain (monthly rate)	Less than 15 seconds at normal temperature range (5° C \sim 35° C) (41° F \sim 95° F)	EHURIN
3	Operational temperature range	-10° C $\sim +60^{\circ}$ C (14° F $\sim 140^{\circ}$ F) 0° C $\sim +40^{\circ}$ C (32° F $\sim 104^{\circ}$ F) for water depth measurement function	
4	Driving system	Step motor, 4 pieces	
5	Display system TIME/CALENDAR display DEPTH MEASUREMENT display LOG DATA display	Hour, minute and small second hands and date Current depth by DEPTH hand and 1/10 m hand Maximum depth by MAX. DEPTH hand (in 0.5 m increments) Diving time by DIVING TIME hand (in 1/5 minute increments) Time submerged by the small hour and minute hands at the 6 o'clock position Stores details of two dives. Maximum depth by MAX. DEPTH hand (in 0.5 m increments) Average depth by DEPTH hand and 1/10 m hand Diving time by DIVING TIME hand (in 1/5 minute increments)	
	ALARM display	Time submerged by the small hour and minute hands at the 6 o'clock position Small hour and minute hands at the 6 o'clock position • While disengaged : Current time • While engaged : Designated alarm time	3

		/ locardo, or the diamin 2 minute
6	Battery	Miniature lithium battery SEIKO CR2016, 1 piece Battery life: approx. 2 years
7	Battery life indicator	When the battery life nears its end, the small second hand moves at 2-second intervals and the DEPTH hand points to the 58-minute position before diving.
8	IC (Integrated Circuit)	C-MOS-LSI, 2 pieces Semiconductor pressure sensor, 1 piece
9	Accuracy of sensors Water depth	Within ± (Indicated value x 3.0% + 0.5 m) at a stable temperature [Influence of temperature change] Within ±1 m for a temperature change of 20° C
10	Magnetic resistance	4,800 A/m (60 gauss)
11	Water resistance	Withstands water pressure to a depth of 200 m and is therefore suitable for scuba diving.
12	Safety design	The case, bracelet and buckle are rounded to prevent damage to the diving suit or user's skin.
		and the second s

Accuracy of the alarm: ±1 minute

^{*} The specifications are subject to change without prior notice for product improvement.