Wireless
Pool Thermometer

PS 50

Operating Manual

Please read these instructions carefully from start to finish before initial start-up to avoid functional breakdown and faulty operation. The manual contains much important information about the installation and operation. Keep the manual available for future reference.
If you sell or give away this unit to other persons, hand over also this manual.

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Content

1. General information and function

This wireless, battery-operated pool thermometer is a high quality measuring system to define the temperatur of water in swimming pools, garden pools, bowls etc. It is water-proof and can swim.
The thermometer indued with own temperature display. This can show the temperature in centigrade (°C) or degrees Fahrenheit (°F).
The thermometer indued with a transmitter for send the temperatur data to the wireless poolthermometer basic station PS 50. Also it is possible to receive the data with many weather stations. The following weather stations are compatible to this wireless thermometer:
- BA 1010
- WS 200
- WS 3000
- WS 300 PC
- WS 250 Edition

This weather stations can receive the data as a normal outdoor sensor. For this using the pool thermometer is addressable accordingly to the adress system. Please refer to the manual of the weather station.

2. Indended usage

The product is intended for domestic use. It is not suitable for medical purposes or public information.

This product is designed for show the water temperatur in pools, bowls etc. It is only designed to using into water, not other liquids!

The product is battery-operated. It transmits his data per radio to a base station (see below, 868 MHz, range up to 300 ft. in open space).

Any other use than that described above may go to damage the product or to other danger.

The product has been EMC-tested and meets the requirements of the valid international guidelines. CE-conformity has been proven and the corresponding declarations deposited with the manufacturer.

3. Safety Instructions

We shall not assume any liability for damage to items or persons caused by improper handling or non-observance of the safety instructions!
In such cases, any guarantee claims shall become null and void.

- Do not use this product in hospitals or medical institutions. Although the outdoor sensor only emits relatively weak radio signals, these may cause interference to life-support systems. The same can also apply in other areas.
- Do not use the unit, if there are damages on the housing.
- Do not subject the device to temperatures below 32°F (0°C) or above 158°F (70°C).
- Caution by danger of freezing! Take the unit out of the water, if the temperature goes to 32°F (0°C).
- For safety and licensing reasons (CE), it is not permitted to convert or modify the product.
- Do not leave the packaging material laying around. Plastic foil and bags, polystyrene parts etc. are dangerous toys in the hands of children.
- This product is not a toy. It contains glass and small parts, children can swallow up them. Erect the unit out of the reach of children.
- This product is not a toy for pets. It contains peaked and dangerous materials, they can harm pets, if they bite to the unit.

4. Battery and environment instructions

- Batteries do not belong in the hands of children.
- Observe the right polarity when inserting the batteries.
- Do not leave batteries laying around. Pets or small children may swallow them. If they are swallowed, contact a doctor immediately.
- Leaking or damaged batteries may lead to injury to the skin. For this reason, use suitable protective gloves when changing them.
- Make sure that batteries or accumulators are not thrown into the fire or short-circuited. There is a likelihood of explosion!
- Never dismantle batteries!
- Do not recharge normal batteries. There is a risk of explosion!
- If the product is not used for longer periods of time (e.g. in case of storage), please remove the inserted batteries in order to prevent damage caused by leaking batteries.

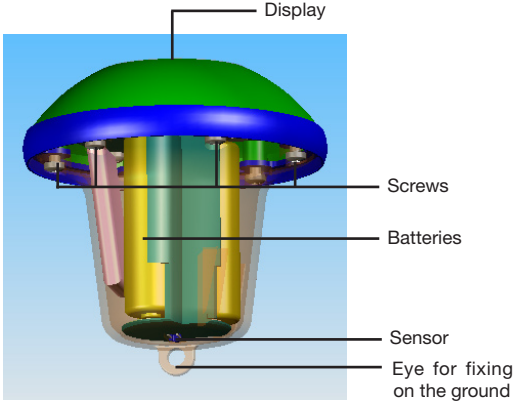
5. Preparing for operation

5.1. Open the housing

- Rotate the unit and unscrew the 6 screws (see below)
- Lift up the upper part carefully.

5.2. Inserting the batteries

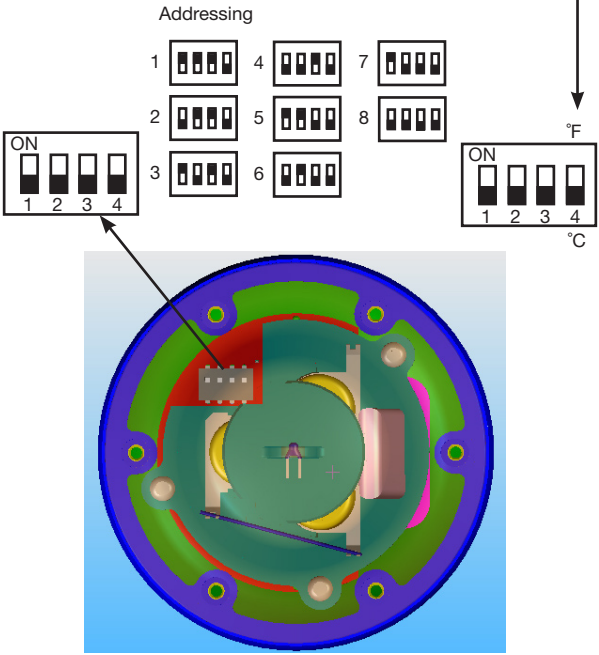
- The unit is operated with 3 x 1,5 V AA batteries. You should take alkaline batteries (LR6) for longer using and better safety against leaking.
- Insert the three batteries into the battery holder with right polarity as shown in the battery holder.
- If you want to make settings (addresses or measuring unit), go to the next chapters.
- Or else you can close the housing. Please follow these instructions for reassembling the pool sensor. It is absolutely necessary to tighten each of the six case screws very carefully to insure an even pressure for a correct watertight seal. Tightening of the case screws should be done in a crossover pattern (see figure on the right site)
  1. Position seal so screw holes line up on sensor
  2. Combine sensor and bottom cover and rotate until screw holes line up
  3. Double check blue seal (seal should overlap sensor and cover)



4. Insert and tighten all screws in a crossover pattern (see figure below) until you feel an increase in resistance
5. Double check the seal to insure proper fitting
6. Tighten first screw (1) one full turn
7. Tighten screw across from the first screw (2) one full turn
8. Then tighten the screw next to the first screw (3) one full turn
9. Repeat this crossover process for the remaining screws (4) – (6)

5.3. Setting address and measuring unit

- If you have take the unit out of the lower part, you can see the DIP-Switch on the lower side of the electronic part (see below).
- The DIP-Switches 1-3 are used for addressing, the switch 4 ist used for choosing the measuring unit. The default values are adress 8 and the measuring unit Fahrenheit.
- If you will transmit the data to a weather station, choose the address accordingly the description of your weather station. The allocation you see below. After some time the value is available on the weather station.
- Choose the measuring unit accordingly the allocation below.
- Close the housing as per description in chapter 5.2.



6. Operation

- Set the accurately closed unit on the water surface.
- Wait some seconds, till the temperature display shows a stable value. The housing and the inner of the thermometer needs some time till they has the same temperatur as the water.

Caution!
- Do not pitch the unit into the water and use it not as a toy or sport equipment.
- Look after your dog - the dogs can understand the unit as a toy!
- Do not submerge the unit - it ist designed for working on the water surface.
- Do not dip the unit into hot water (max. 158°F/70°C) or in icy water.
- Take the unit out of the water, if it is no required.

7. Range

The free field range, i.e. the range of the line of sight contact between the transmitter and the receiver is 300 ft. under optimum conditions. Walls and even reinforced concrete can be penetrated, which does, however, reduce the range. A reduced range can occur due to the following reasons:
- High-frequency interference of all kinds
- Built structures and vegetation of all types
- The distance of the transmitter or receiver from conductive surfaces or objects (even to the human body or the ground) has an effect on the transmission characteristics and therefore the range.
- Wide band interference in built up areas can reach levels that reduce the signal-noise ratio throughout the frequency band which results in a reduced range.
- Devices with adjacent working frequencies can also influence the receiver.
- Badly shielded PCs can irradiate the receiver and limit its range.

8. Maintenance

8.1. Changing the batteries

- If the flat battery symbol appears in the display (Lo Bat) all batteries must be changed for ones of the same type as described in Section 5.2 (p. 6).
  Always change all 3 batteries and use only high-quality alkaline cells.

Lo-Bat

8.2. Cleaning

- Clean the unit using only a soft cloth. Do not use cleaners containing solvents. Make sure that no moisture enters the interior of the unit.
- Do not exert any pressure on the display.

9. Disposal

9.1. General

- Dispose of the unusable product according to valid legal regulations

9.2. Disposing of used batteries

- You, as ultimate consumer, are required by law (battery regulations) to return all used batteries. Disposing of used batteries with domestic waste is prohibited!
- Batteries / accumulators containing toxins are marked by appropriate symbols which refer to the prohibition of disposal with domestic waste.
- The designations for the decisive heavy metals are:
  Cd = cadmium, Hg = mercury, Pb = lead (The designation can be found on the battery under the dustbin symbol illustrated on the right).

- You may return used batteries/accumulators free of charge to collecting stations, our outlets or anywhere else where batteries/accumulators are sold.

  By doing so, you fulfil the legal requirements and contribute to the conservation of our environment.

10. Technical Data

Measurement range: .....32°F to 158°F (0°C to 70°C)
Resolution: ..... 0.1°F/°C
Accuracy: .....±1.8°F/±1°C
Display updating:..... every 5 sec.
Data transmission interval: .....about 3 min.
Transmission frequency:..... 868.35 MHz
Free field range:.....max. 300 ft.
Voltage supply: .....3 x 1.5 V/AA battery (LR 6/Mignon)
Battery service life: .....2-3 years
Dim. (H x ø):.....88 x 84 mm