

1. On/Off function

- 

Press briefly
- 

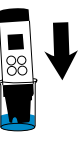
If ! appears, deactivate with
- 

Automatic shut-off after 8 min. of inactivity
- 

Press and hold for 3 sec. to switch off the device
- 

Display lighting on/off

2. Measuring the pH value

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Hold the device without protective cap in the sample water to be measured so that the device is immersed in the sample water no higher than the seal ring.
- 

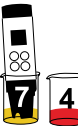
The measurement is displayed.
- 

Briefly press ! to freeze/release the measurement
- 

Press and hold for 3 sec. to save the measurement

The storage location (e.g. 01) appears in the display while the button is pressed

3. Calibration

- The electrode should be cleaned thoroughly with distilled water before it is immersed in another buffer solution.
- Recalibrate as necessary.
- For use of Lovibond buffer solutions or pH buffer tablets, refer to the instructions (see 4.)
- 

Remove the protective cap, switch on the device, rinse the electrode with distilled water, then immerse in the pH 7 buffer solution.

 Press Cal for 3 sec.

CAL 1 blinks in the display

Wait until  goes out

 Press Cal for 1 sec.

Calibration is performed

CAL 2 blinks in the display



End the 1-point calibration or continue with



Rinsing of the electrode with distilled water and immersing it in the pH 4  buffer solution.

CAL 2 blinks in the display

Wait until  goes out

 Press Cal for 1 sec.

Calibration is performed

CAL 3 blinks in the display



End the 2-point calibration or continue with



Rinsing of the electrode with distilled water and immersing it in the pH 10  buffer solution.

CAL 3 blinks in the display

Wait until  goes out

 Press Cal for 1 sec.

Calibration is performed

3-point calibration is finished

 shows the type of calibration (1-point to 3-point calibration) in the display.

4. Producing the pH buffer solutions

1. A clean container is filled with 20 ml of deionised / distilled water.
2. A buffer tablet is added and dissolved in the measured value.
3. After a wait time of approximately two minutes, the active tablet components have dissolved and the insoluble components have settled to the bottom of the container.
4. The electrode is immersed in the buffer solution and the calibration is performed (see 3.).
5. The electrode is removed from the container and thoroughly cleaned.

6. The buffer solution is intended for a single use.

Precision

The freshly prepared buffer must not deviate from the specified pH value by more than ±0.05 pH.

5. Selection pH/mV

 Selection between pH and mV

Wherein mV stands for millivolts and does NOT indicate the Redox potential

6. Viewing saved data

- 

Switch on
- 

Press for 3 sec.
- 

The last storage location blinks
- 

Confirm
- 

Switch between storage locations
- 

Close
- 

The last storage location is shown

7. Deleting saved data

- 

View the saved values (see 6.)

Press for 3 sec.
- 

CLEAR blinks
- 

Confirm deletion of values

All values are deleted
- 

Process closes automatically

8. Select buffer system

- 

Switch on
- 

Press for 3 sec.
- 

Press 1 x

Adjusted buffer system blinks
- 

Confirm

- 

Selection of the buffer system (7.00 or 6.86)
- 

Save and close

9. Type of display of date and time

- 

Switch on
- 

Press for 3 sec.
- 

Press 4 x
- 

Date appears

- 

Confirm
- 

Choose between 12-hour clock (AM/PM) and 24-hour clock



Save and close

10. Adjusting date and time

- 

Switch on
- 

Type of display must be selected beforehand (see 9.)
- 

Press for 3 sec.
- 

Press 2 x

- 

Time blinks
- 

Confirm
- 

Minutes can be adjusted.

- 

To increase
- 

To decrease



Save and switch to hours

- 

To increase
- 

To decrease

- 

Save and switch to year
- 

To increase
- 

To decrease
- 

Save and switch to month/day
- 

To increase
- 

To decrease
- 

Save and close

11. Adjusting the temperature unit

- 

Switch on
- 

Press for 3 sec.
- 

Press 3 x
- 

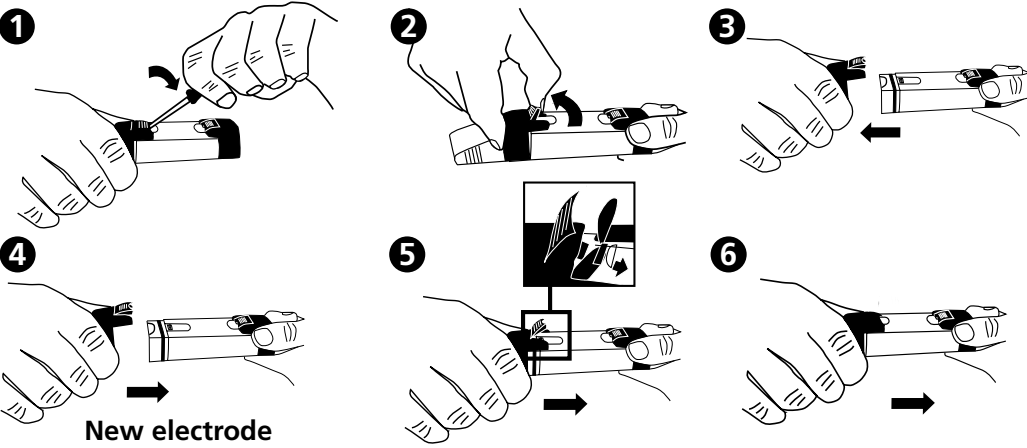
Temperature unit blinks
- 

Confirm
- 

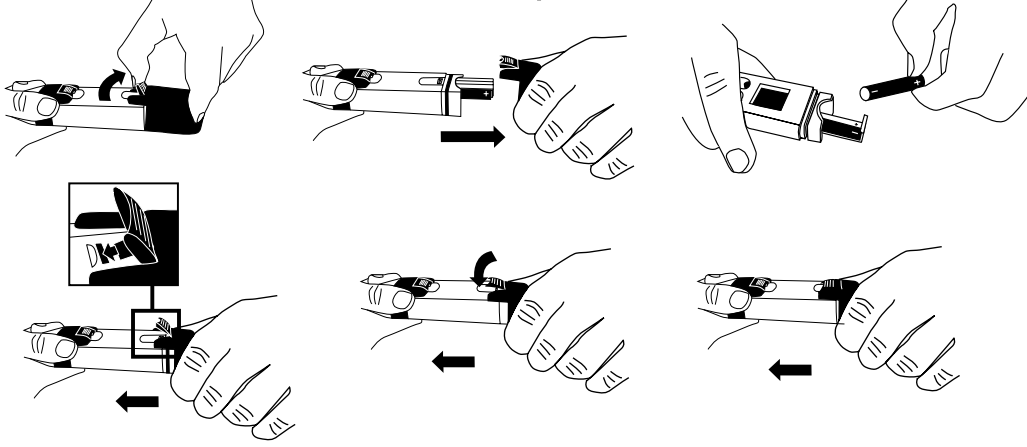
Selection of temperature unit (°F/°C)
- 

Save and close

Replacing electrodes



Replace battery



Error messages and procedure

	Description	Measuring range	Procedure
Err 1	Electrode locked incorrectly or defective	Thermistor: 0.5~100 kΩ	Connect correctly or replace electrode
Err 2	pH outside of the measuring range electrode is not immersed in solution	0~14 pH	Use new buffer solution or replace electrode place electrode in the solution
Err 3	Temperature outside of the measuring range	0~60 °C	Bring measuring solution specified temperature-range
Err 4	Offset outside of the range	-60~60 mV	Use new solution or replace electrode
Err 5	Drift outside of the range 50~68 (mV/pH)	85%~115%,	Use new solution or replace electrode
Err 6	mV outside of the range	-1800~1800 mV	Use new mV solution

Accessories

1950026	AAA batteries in 4-pack (2 batteries required)
19 48 20	pH spare electrode
38 48 01	Measuring beaker, 100 ml
19 48 10-16	Plastic box
45 70 22	VE water for rinsing the electrode

Warranty

The warranty for the SD 50 is valid for a period of 2 years from the date of purchase; the warranty for the electrode is 6 months. This does not cover damages resulting from improper handling or based on mechanical damage.

pH buffer

Article no.	72 12 50 pH buffer set, 90 ml each (25°C) 4.00/7.00/10.00
	72 12 47 pH buffer 4.00 (25°C) 90 ml
	72 12 48 pH buffer 7.00 (25°C) 90 ml
	72 12 49 pH buffer 10.00 (25°C) 90 ml
	51 56 00 BT buffer tablets pH 10 100 units
	51 56 01 BT buffer tablets pH 10 250 units
	51 56 10 BT buffer tablets pH 7 100 units
	51 56 11 BT buffer tablets pH 7 250 units
	51 56 20 BT buffer tablets pH 4 100 units
	51 56 21 BT buffer tablets pH 4 250 units

Storing the electrode

The electrode must be stored in a 3 M KCl solution for at least 5 hours before the initial use. For this purpose, fill a suitable glass until the glass portion of the electrode is completely immersed. Observe the 'Important information for pH electrodes' for exact details on storage and safekeeping.

SD 50 pH Specifications

- 1 Temperature range 0-60 °C, 0-14 pH, -1800 mV to +1800 mV
- 2 pH resolution 0.01 pH, Accuracy ± 0.05 pH
- 3 Buffer system selection (pH 7.00 or pH 6.86): 1-, 2-point or 3-point calibration with automatic recognition
- 4 Automatic temperature compensation
- 5 mV resolution 0.1 mV within ±1000 mV and 1 mV outside of ±1000 mV, Accuracy ±20 mV
- 6 Temperature resolution 0.1 °C, selection of °C or °F
- 7 Display of time and date with 25 storage locations (not permanent)
- 8 22x22 mm LCD display with yellow-brown display background lighting
- 9 2 x AAA batteries 1.5 V
- 10 Battery capacity > 350 h with continuous use (without display lighting) Low battery indicator in the display
- 11 Automatic device shut-off after 8 minutes of inactivity

SD 50
pH

