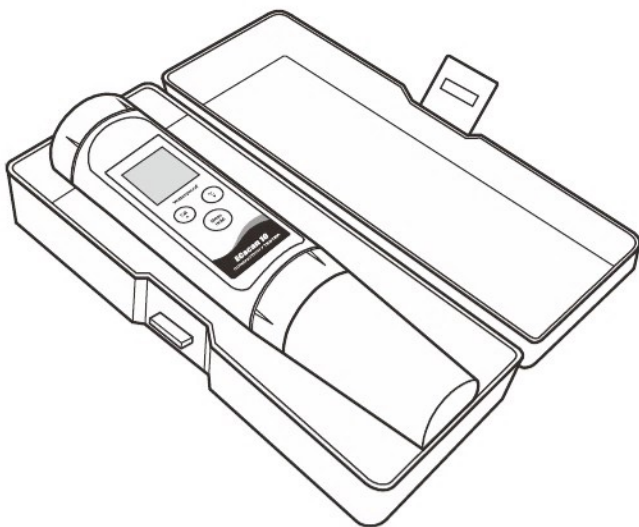


ECscan10 Pocket Conductivity Tester

Instruction Manual

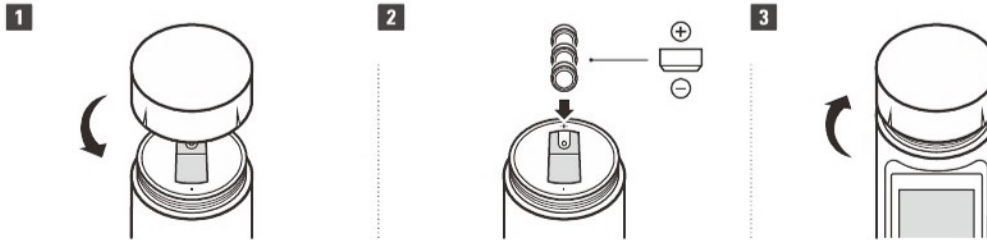


Overview




Thank you for selecting the ECscan series pocket conductivity tester. This manual provides a step-by-step guide to help you operate the instrument, please carefully read the following instructions before use.

Installing the Batteries

1. Remove the battery compartment lid.
2. Insert the three LR44 batteries into the battery compartment, note polarity.
3. Replace the battery compartment lid to its original position and turn clockwise until tight.

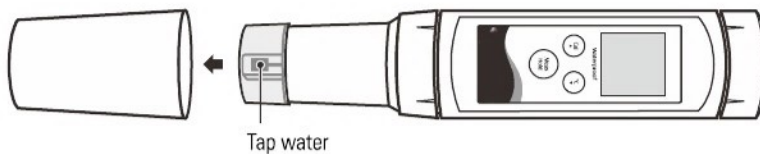


Keypad

Key	Function
	<ul style="list-style-type: none"> • Switch the tester on or off • Lock the reading, press the key again to resume measurement • Confirm or exit the calibration • Return to the conductivity measurement mode
	<ul style="list-style-type: none"> • Press and hold the key to enter the calibration mode • Increase value during the setting
	<ul style="list-style-type: none"> • Show the temperature readings • Decrease value during the setting

Prior to Use

- Remove the protective cap and translucent cover from the bottom of the tester.
- If the platinum sensor has dried out, soak the electrode for about 10 minutes in tap water.



Switching the Tester On and Off

- Press the **Meas** key to switch on the tester.
- Press and hold the **Meas** key to switch off the tester.
- If you do not press any key within 8 minutes, the tester will automatically switch off to conserve energy.

Conductivity Calibration

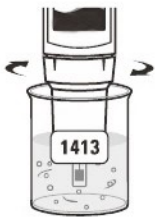
The ECscan10 conductivity tester allows 1 point calibration. For better accuracy, we recommend to calibrate the tester regularly. The following table shows acceptable standard solutions for each tester.

Model	Standard Solution Range	Default
ECscan10L	100 to 180 $\mu\text{S}/\text{cm}$	146.5 $\mu\text{S}/\text{cm}$
ECscan10M	1000 to 1800 $\mu\text{S}/\text{cm}$	1413 $\mu\text{S}/\text{cm}$
ECscan10H	10 to 18 mS/cm	12.88 mS/cm

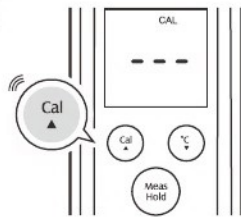
Make sure that using the fresh standard solution during the calibration. DO NOT reuse the standard solution after calibration, contaminants in solution will affect the calibration and eventually the accuracy of the measurement.

1. Rinse the electrode with deionized water and place into the standard solution, stir tester gently to remove air bubbles trapped in the slot of the sensor.
2. Press and hold the **Cal** key to enter the calibration mode, the display shows "---".
3. Press the $\blacktriangle/\blacktriangledown$ key to set the calibration value. Make sure that the displayed value matches your calibration standard.
4. Press the **Meas** key, the calibration value will automatically flash three times and the CAL icon disappears from the display. Calibration is completed.

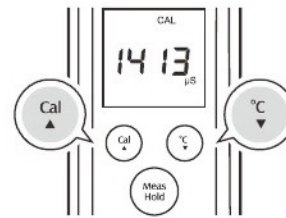
1



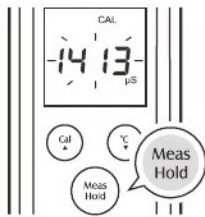
2



3



4



i

- During the calibration, if the display shows **ERR** indicating that the measured conductivity value deviates from the theoretical value of the standard solution. The calibration will not be accepted. Please replace the fresh standard solution and calibrate the tester again.
- During the setting, press and hold the $\blacktriangle/\blacktriangledown$ key will make the value change faster.
- If you want to exit the calibration mode, DO NOT press the **Meas** key in the step 4. Press and hold the $\blacktriangle/\blacktriangledown$ key until the display shows "----", press the **Meas** key to exit.

Measurement

Conductivity Measurement

Rinse the electrode with deionized water. Place the electrode into the sample solution and stir gently. Make sure that no air bubbles on the sensor surface. Wait for the measurement to stabilize and record the reading.

- i** If the display shows ∞ , indicating the measurement exceeds the range, remove the tester from the sample immediately.

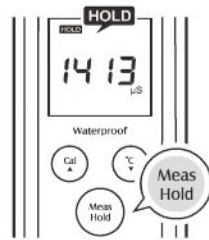
Temperature Measurement

- Press the **°C** key, the tester shows the temperature readings.
- Press the **Meas** key to return to the conductivity measurement.

Hold Function

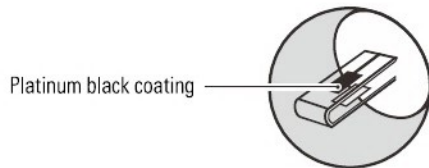
This function lets you lock the conductivity reading for viewing and recording.

- Press the **Hold** key, the tester locks the measurement, the "HOLD" icon appears on the display.
- Press the key again to resume measurement.



Electrode Maintenance and Replacement

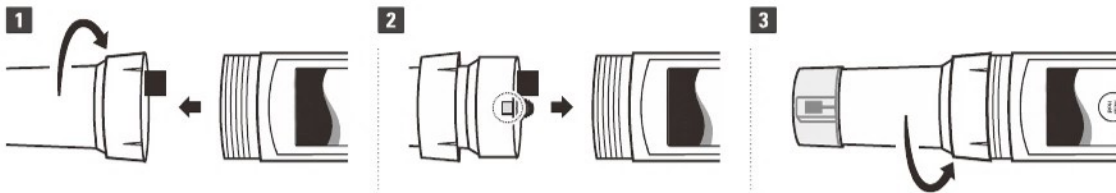
- Rinse the electrode thoroughly with deionized water after use.
- Do not touch the platinum black coating on sensor surface and always keep it clean.
- If there is a build-up of solids inside the sensor, remove very carefully, then recalibrate the tester.
- If you do not use the tester for long periods, store the electrode with tap water.



Replacing the Electrode

If the tester fails to calibrate or gives fluctuating readings, the electrode needs to be replaced.

- Twist the electrode collar counter clockwise, pull the electrode away from the tester.
- Align the slot on the new electrode, gently push the electrode into the tester.
- Twist the electrode collar clockwise until tight.



Appendix

Preparation of Conductivity Standard Solutions

Place the analytical grade potassium chloride (KCl) reagent in a beaker and dry in an oven for about 3 hours at 105°C (221°F), then cool to room temperature. Add the reagent to a 1 litre volumetric flask according to the instructions in table below. Fill the deionized water to the mark, mix the solution until the reagent is completely dissolved.

Conductivity Standard	Reagent	Weight
146.5 μ S/cm	KCl	47.4 mg
1413 μ S/cm	KCl	745.9 mg
12.88 mS/cm	KCl	7.45 mg

Optional Accessories

Order Code	Description
E-ECscan-C1-100K	Platinum conductivity electrode, cell constant K=1
ECCS-146	Conductivity standard solution 146.5 μ S/cm, 480 ml
ECCS-1413	Conductivity standard solution 1413 μ S/cm, 480 ml
ECCS-1288	Conductivity standard solution 12.88 mS/cm, 480 ml

Specifications

	Model	ECscan10L	ECscan10M	ECscan10H
Conductivity	Range	1.0 to 199.9 μ S/cm	10 to 1999 μ S/cm	0.1 to 19.99 mS/cm
	Resolution	0.1 μ S/cm	1 μ S/cm	0.1 mS/cm
	Accuracy	\pm 1% F.S.		
	Calibration Point	1 point		
	Calibration Solution	146.5 μ S/cm	1413 μ S/cm	12.88 mS/cm
	Temperature	Range	0 to 50°C	
Resolution		1°C		
Accuracy		\pm 1°C		
Other Specifications	Temperature Compensation	0 to 50°C, automatic		
	Cell Constant	K=1		
	Operating Temperature	0 to 50°C (32 to 122°F)		
	Storage Temperature	-5 to 60°C (23 to 140°F)		
	Relative Humidity	< 80% (non-condensing)		
	IP Rating	IP54		
	Display	Single-line LCD, 21 x 21 mm (0.82 x 0.82")		
	Power Requirements	3 x 1.5V LR44 micro alkaline batteries		
	Auto-Off	8 minutes after last key pressed		
	Dimensions	185(L) x 40(Dia.) mm (7.28 x 1.57")		
Weight	100 g (3.5 oz.)			

Disposal

This tester is required to comply with the European Union's Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC and may not be disposed of in domestic waste. Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.

**Warranty**

The warranty period for tester is one year from the date of shipment. Above warranty does not cover the electrode and standard solution. Out of warranty products will be repaired on a charged basis. The warranty on your tester shall not apply to defects resulting from:

- Improper or inadequate maintenance by customer.
- Unauthorized modification or misuse.
- Operation outside of the environment specifications of the products.

For more information, please contact the supplier.
