

Family Datasheet

ECO 510 / ECO 511 Waterproof pH meter

- Modern and functional housing
- Excellent price-performance ratio
- Waterproof (IP65 / IP67)
- 3-line display / overhead display per button, backlight
- Robust, long battery life
- BNC connection for interchangeable electrodes
- Sets with low-maintenance pH electrodes GE 114 / GE 135
- Excellent accuracy thanks to calibration with GPH-DOS 4/7/10 (accessory)
- Hold function for freezing measured values
- Min/max function for minimum and maximum recorded measured values



DESCRIPTION

When developing the ECO 51x series, the focus was placed on the essential functions of measurement technology. Pure measurement with a focus on precision, speed and reliability, packaged in a compact housing, is what makes the outstanding price-performance ratio, Made in Germany, possible.

The handheld meters also impress with their ergonomic design, dust and water-protected design in accordance with IP 65/67 and the illuminated display. The compact pH meters are a real alternative to pH sticks on the one hand and high-priced, complex devices on the other.

The ECO 510 meter enables measurements in the pH range, while the ECO 511 also offers the option of pH/redox measurements with a temperature input (Pt1000).



ECO 510 front



ECO 511 front

Applications

The measuring devices can be used in aquaristics, aquaculture and water monitoring, plant cultivation, agriculture, laboratories, quality assurance, service and food.

Applications without temperature input necessary: Measuring in pools, well-water, etc.: Temperature is constant – can be entered manually once.

Applications where temperature input of ECO 511 is recommended: Field measuring, e.g. surface water, wastewater, etc.: Temperature is compensated most precise and comfortable!

Display

Thanks to backlight, the three-line LCD display offers ergonomic wide-angle visibility - by day and night.

Power supply

2 powerful AA batteries, the energy-saving design and the configurable automatic switch-off function ensure long operation.

Configurable LCD backlight for additional energy-saving options.

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TECHNICAL SPECIFICATIONS

Measurement specifications

	ECO 510	ECO 511
Inputs	BNC pH electrode connector (Temperature input manually)	BNC pH/ORP electrode connector Temperature input Pt1000 2 x 4mm banana Automatic temperature compensation via temperature input
Recommended electrodes	Standard GE 114 WD	pH: Standard GE 114 WD or GE 135 combination electrode with T-sensor Redox: GR 105
Measuring range	0.0...14.00 pH	0.0...14.00 pH ORP \pm 1500 mV Temperature -0.5 ..+105.0 °C
Accuracy	\pm 0.02 pH \pm 1 digit (at nominal temperature 25 °C)	
Maximum cable length	3 m	

General specifications

Display	3-line with battery status display, Backlight, protected by shatterproof glass, Overhead display at the touch of a button
Power supply	2 x AA alkaline batteries (included)
Power consumption	<1 mA
Battery life	> 3000 h typ. continuous operation
Automatic switch-off	Yes, configurable by the user
Operating conditions	-20...50 °C device (note the application range of the electrode, usually -5...50°C)
Storage temperature	-20...70 °C (without batteries)
Protection class	IP65 / IP67 (only with electrodes with waterproof BNC connection)
Dimensions	108 x 54 x 28 mm (incl. BNC: 116 x 54 x 28 mm)
Weight	approx. 130 g (ECO 510), approx. 135 g (ECO 511)
Housing material	Impact resistant ABS, polyester (front panel)

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ORDER CODES

ECO510	
Waterproof pH-meter (formerly G 1500)	
1	Scope of delivery
	Device in carton box, test-protocol, batteries, manual, without electrode
-114	Device in carton box, test-protocol, batteries, manual, pH electrode GE 114-WD, entry level set, for water with min. conductivity 200 µS/cm
-100	Device in carton box, test-protocol, batteries, manual, long life versatile pH electrode GE 100, e.g. application Koi Pond, low conductivity from 100µS/cm
-SET	Device in suitcase GKK 1001, test-protocol, batteries, manual, pH electrode GE 114-WD, GAK 1400, e.g. application pool
-SET100	Device in suitcase GKK 1001, test-protocol, batteries, manual, pH electrode GE 100, GAK 1400, e.g. application soil /compost
ECO511	
Waterproof pH/ORP-meter with Pt1000 input and alarm (formerly G 1501)	
1	Scope of delivery
	Device in carton box, test-protocol, batteries, manual, without electrode
-114	Device in carton box, test-protocol, batteries, manual, pH electrode GE 114-WD (without T-sensor)
-SET	Device in carton box, test-protocol, batteries, manual, pH electrode GE 114-WD + GF1T-T3-B-BS + GPH4.0/5+GPH7.0/5 + 2x GPF100
-135	Device in carton box, test-protocol, batteries, manual, pH electrode GE 135 1m (PT1000)
-SET114	Device in suitcase GKK 1001, test-protocol, batteries, manual, pH electrode GE 114-WD, T-probe GF1T-T3-B-B, GAK 1400
-SET135	Device in suitcase GKK 1001, test-protocol, batteries, manual, pH electrode GE 135 1m (Pt1000), GAK 1400

STANDARD ARTICLES

ECO510	Waterproof pH meter (formerly G 1500) Device in carton box, test-protocol, batteries, manual, without electrode	Art no. 486761
ECO510-114	Waterproof pH meter (formerly G 1500) Device in carton box, test-protocol, batteries, manual, pH electrode GE 114-WD, entry level set, for water with min. conductivity 200 µS/cm	Art no. 486762
ECO510-SET	Waterproof pH meter (formerly G 1500) Device in suitcase GKK 1001, test-protocol, batteries, manual, pH electrode GE 114-WD, GAK 1400, e.g. application pool	Art no. 487057
ECO511	Waterproof pH/ORP meter with Pt1000 input & alarm (formerly G 1501) Device in carton box, test-protocol, batteries, manual, without electrode	Art no. 486763
ECO511-114	Waterproof pH/ORP meter with Pt1000 input & alarm (formerly G 1501) Device in carton box, test-protocol, batteries, manual, pH electrode GE 114-WD (without T-sensor)	Art no. 487060
ECO511-SET	Waterproof pH/ORP meter with Pt1000 input & alarm (formerly G 1501) Device in carton box, test-protocol, batteries, manual, pH electrode GE 114-WD + GF1T-T3-B-BS + GPH4.0/5+GPH7.0/5 + 2x GPF100	Art no. 487062
ECO511-135	Waterproof pH/ORP meter with Pt1000 input & alarm (formerly G 1501) Device in carton box, test-protocol, batteries, manual, pH electrode GE 135 1m (PT1000)	Art no. 486764
ECO511-SET135	Waterproof pH/ORP meter with Pt1000 input & alarm (formerly G 1501) Device in suitcase GKK 1001, test-protocol, batteries, manual, pH electrode GE 135 1m (Pt1000), GAK 1400	Art no. 487064

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ACCESSORIES

GE 114 WD Low-maintenance gel electrode GE 114 WD (waterproof BNC connection), 1 m **Art no. 610460**



Measuring range: 0.0...14.00 pH
 Operational range: 0...60 °C
 Conductivity: >200 µS/ cm
 Waterproof: IP 65/67
 Electrolyte: Gel electrolyte
 Diaphragm: 1 x Pellon

GE 100 BNC Universal electrode, replacement pH electrode, 1 m **Art no. 600704**

Conductivity: >100 µS/ cm
 Measuring range: 0.0...14.00 pH
 Operational range: 0...80 °C
 Waterproof: only shaft
 Electrolyte: KCL
 Diaphragm: 2 x Ceramic

Only for ECO 511, not ECO 510:

GE 135-WD Universal combination pH electrode incl. Pt1000, replacement pH electrode, 1 m **Art no. 483292**

GE 135-WD-L02 Universal combination pH electrode incl. Pt1000, replacement pH electrode, 2 m **Art no. 483293**

Conductivity: >150 µS/ cm
 Measuring range: 0.0...14.00 pH, 0...80 °C
 Waterproof: IP 65/67
 Pressure resistant: 5bar
 Electrolyte: Gel electrolyte
 Diaphragm: 1 x Ceramic

GR 105-BNC Redox electrode **Art no. 607798**

CONSUMABLES:

GPH-DOS-4 ready-to-use buffer solution (pH 4.01 / 25 °C), 250 ml **Art no. 485556**

GPH-DOS-7 ready-to-use buffer solution (pH 7.00 / 25 °C), 250 ml **Art no. 485554**

GPH-DOS-10 ready-to-use buffer solution (pH 10.01 / 25 °C), 250 ml **Art no. 485557**

GAK 1400 Working- and calibration set consisting of: 5 x buffer capsules GPH 4.0, GPH 7.0 and GPH 10.0, 3 x 100 ml plastic bottle GPF 100, 1 x 3 mol KCL electrolyte, KCL3M and 1 x cleaning solution GRL 100 **Art no. 603523**

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